

STP 11-31U14-SM-TG
HEADQUARTERS
DEPARTMENT OF THE ARMY

**Soldier's Manual
and Trainer's Guide**

MOS 31U
SIGNAL SUPPORT
SYSTEMS SPECIALIST

SKILL LEVELS 1, 2, 3, AND 4

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SOLDIER'S MANUAL and TRAINER'S GUIDE

MOS 31U

SIGNAL SUPPORT SYSTEMS SPECIALIST

Skill Levels 1, 2, 3 and 4

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DESTRUCTION NOTICE:

This publication supersedes STP 11-31U14-SM-TG, 14 June 1996.

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PREFACE

This publication is for skill levels (SL) 1, 2, 3, and 4 soldiers holding military occupational specialty (MOS) 31U and for trainers and first-line supervisors. It contains standardized training objectives, in the form of task summaries, to train and evaluate soldiers on critical tasks that support unit missions during wartime. Trainers and first-line supervisor should ensure soldiers holding MOS 31U, SLs 1, 2, 3, and 4 have access to this publication. It should be made available in the soldier's work area, unit learning center, and unit libraries.

This manual applies to both Active and Reserve Component soldiers.

The proponent for this publication is the Signal School. Send comments and recommendations on DA Form 2028 directly to Commander, US Army Signal Center and Fort Gordon, ATTN: ATZH-DTM-I, Fort Gordon, Georgia 30905-5074.

This manual is available on the World Wide Web (WWW) for viewing and downloading. The WWW address is http://www.gordon.army.mil/stt/31u/Sm_tg.htm.

This manual applies to both active and reserve component soldiers.

Unless this manual states otherwise, masculine pronouns do not refer exclusively to men.

NOTE: Information contained in this publication is subject to change as new equipment is added to the Army inventory and revisions in policy and doctrine are made.

CHAPTER 1

Introduction

1-1. GENERAL

a. This manual identifies the individual MOS training requirements for soldiers in MOS 31U. Commanders, trainers, and soldiers should use it to plan, conduct, and evaluate individual training in units. This manual is the primary MOS reference to support the self-development and training of every soldier.

b. Use this manual with the soldier's manuals of common tasks (STP 21-1-SMCT and STP 21-24-SMCT), Army Training and Evaluation Programs (ARTEPs), and FM 25-101, *Battle-Focused Training*, to establish effective training plans and programs that integrate soldier, leader, and collective tasks.

1-2. TASK SUMMARIES

a. Task summaries outline the wartime performance requirements of each critical task in the soldier's manual (SM). They provide the soldier and the trainer with the information necessary to prepare, conduct, and evaluate critical task training. As a minimum, task summaries include information you must know and the skills that you must perform to standard for each task. The format for the task summaries included in this SM is as follows:

(1) **Task Title.** The task title identifies the action to be performed.

(2) **Task Number.** A 10-digit number that identifies each task or skill. Include this task number, along with the task title, in any correspondence relating to the task.

(3) **Conditions.** The task conditions identify all the equipment, tools, references, job aids, and supporting personnel that the soldier needs to perform the task in wartime. This section identifies any environmental conditions that can alter task performance, such as visibility, temperature, and wind. This section also identifies any specific cues or events (a chemical attack or identification of a threat vehicle) which trigger task performance.

(4) **Standards.** The task standards describe how well and to what level you must perform a task under wartime conditions. Standards are typically described in terms of accuracy, completeness, and speed.

(5) **Integrated Evaluation Guide.** This section may contain the training information outline (performance steps), evaluation preparation, and evaluation guide (performance measures). The performance steps include detailed training information. The evaluation preparation subsection indicates necessary modification to task performance in order to train and evaluate a task that cannot be trained to the wartime standard under wartime conditions. It may also include special training and evaluation preparation instructions to accommodate these modifications and any instructions that should be given to the soldier before evaluation. The performance measures identify the specific actions that the soldier must do to successfully complete the task. These actions are listed in a GO or NO GO format for easy evaluation. Each task contains a feedback statement (Evaluation Guidance) that indicates the requirements (the number of performance measures passed) for receiving a GO on the evaluations.

(6) **References.** This section identifies references that provide more detailed and thorough explanations of task performance requirements than that are given in the task summary description.

b. Additionally, some task summaries include safety statements and notes. Safety statements (danger, warning, and caution) alert user to the possibility of immediate death, personal injury, or damage to equipment. Notes provide a small, extra supportive explanation or hint relative to the performance measures.

1-3. SOLDIER'S RESPONSIBILITIES

Each soldier is responsible for performing individual tasks that the first-line supervisor identifies based on the unit's mission essential task list (METL). The soldier must perform the task to the standards listed in the SM. If a soldier has a question about how to do a task, or which tasks in the manual he must perform, it is the soldier's responsibility to ask the first-line supervisor for clarification. The first-line supervisor knows how to perform each task, or can direct the soldier to the appropriate training materials.

1-4. NCO SELF-DEVELOPMENT AND THE SOLDIER'S MANUAL

a. Self-development is one of the key components of the leader development program. It is a planned progressive and sequential program followed by leaders to enhance and sustain their military competencies. It consists of individual study, research, professional reading, practice, and self-assessment. Under the self-development concept, the NCO, as an Army professional, has the responsibility to remain current in all phases of the MOS. The SM is the primary source of the NCO to use in maintaining MOS proficiency.

b. Another important resource for NCO self-development is the Army Correspondence Course Program (ACCP). Soldiers should refer to DA Pamphlet 351-20, *Army Correspondence Course Program Catalog*, for information on enrolling in this program and a list of courses, or write to: Army Institute for Professional Development, US Army Training Support Center, ATTN: ATIC-IPS, Newport News, VA 23628-0001. Due to eligibility restrictions on specific 31U tracks and equipment requirements for certain subcourses, refer to DA Pamphlet 351-20 for specific information.

c. Graphic training aids (GTAs) are another important resource for NCO self-development. All GTAs should be ordered from the installation's Training Support Center (TSC). Provide the GTA number, title, and quantity on a DA Form 17, *Requisition for Publications and Blank Forms*. A complete and current listing of all GTAs is found in DA Pamphlet 25-37, *Index of Graphic Training Aids*, 1 July 1995. GTE training aids are contractor-produced and contractor controlled. They are not available through the GTA program or the TSC system. These products may be found at units receiving mobile subscriber equipment (MSE).

c. Unit learning centers are valuable resources for planning self-development programs. They can help access enlisted career maps, training support products, and extension training materials, such as field manuals (FM), technical manuals (TM), and training extension course (TEC) lessons. It is the soldier's responsibility to use these materials to maintain performance.

1-5. TRAINING SUPPORT

This manual includes the following appendixes and information that provide additional training support information.

(1) Appendix A, DA Form 5164-R (Hands-on Evaluation). This appendix contains directions for completion and a sample of a completed form.

(2) Appendix B, DA Form 5165-R (Field Expedient Squad Book). This appendix contains directions for completion and a sample of a completed form.

(3) Glossary. The glossary is a single comprehensive list of acronyms, abbreviations, definitions and letter symbols.

(4) References. This section contains two lists of references, required and related, which support training of all tasks in this SM. Required references are listed in the conditions statement and are required for the soldier to do the task. Related references are materials that provide more detailed information and a more thorough explanation of task performance.

CHAPTER 2

Trainer's Guide (TG)

2-1. GENERAL

a. The TG identifies the essential components of a unit-training plan for individual training. Units have different training needs and requirements based on differences in environment, location, equipment, dispersion (actual manning of graphic shops), and similar factors. Therefore, the TG is a guide used for conducting unit training and not as a rigid standard.

b. The TG provides information necessary for planning training requirements for this MOS.

- (1) Identifies subject areas in which to train soldiers.
- (2) Identifies the critical tasks for each subject area.
- (3) Specifies where soldiers are trained.
- (4) Recommends how often each task should be trained to sustain proficiency.
- (5) Recommends a strategy for training soldiers to perform higher-level tasks.

2-2. BATTLE FOCUSED TRAINING

As described in FM 25-100, *Training the Force*, and FM 25-101, *Battle Focused Training*, the commander must first define the METL as the basis for unit training. Unit leaders use the METL to identify the collective, leader, and soldier tasks that support accomplishment of the METL. Unit leaders then assess the status of training and lay out the training objective and the plan for accomplishing needed training. After preparing the long- and short-range plans, leaders then execute and evaluate training. Finally, the unit's training preparedness is reassessed and the training management cycle begins again. This process ensures the unit has identified what is important for the wartime mission, the training focus is applied to the necessary training, and training meets established objectives and standards.

2-3. RELATIONSHIP OF SOLDIER TRAINING PUBLICATIONS (STPs) TO BATTLE FOCUSED TRAINING

a. The two key components of enlisted STPs are the TG and SM. The TG and SM give leaders important information to help in the battle focused training process. The TG relates soldier and leader tasks in the MOS and SL to duty positions and equipment. It provides information on where the task is trained, how often training should occur to sustain proficiency, and who in the unit should be trained. As leaders go through the assessment and planning stages, they should use the TG as an important tool in identifying what needs to be trained.

b. The execution and evaluation of soldier and leader training should rely on the Armywide training objective and standards in the SM task summaries. The task summaries ensure that soldiers in any unit or location have the same definition of task performance, and that trainers evaluate the soldiers to the same standard.

c. The following diagram shows the relationship between battle-focused training and the use of the TG and SM. The left-hand side of the diagram (taken from FM 25-101) shows the soldier training process, while the right side of the diagram shows how the STP supports each step of this process.



2-4. TRAINER'S RESPONSIBILITIES

Training soldier and leader tasks to standard and relating this training to collective mission-essential tasks is the NCO trainer's responsibility. Trainers use the steps below to plan and evaluate training.

(1) Identify soldier and leader training requirements. The NCO determines which tasks soldiers need to train on using the commander's training strategy. The unit's METL and ARTEP and MOS Training Plan (MTP) in the TG are sources for helping the training define the individual training needed.

(2) Plan the training. Training for specific tasks can usually be integrated or conducted concurrently with other training or during "slack periods." The unit's ARTEP can assist in identifying soldier and leader tasks that can be trained and evaluated concurrently with collective task training and evaluation.

(3) Gather the training references and materials. The SM task summary list all references which can assist the trainer in preparing for the training of that task.

(4) Determine risk assessment and identify safety concerns. Analyze the risk involved in training a specific task under the current conditions at the time of scheduled training. Ensure that your training preparation takes into account those cautions, warnings, and dangers associated with each task.

(5) Train each soldier. Show the soldier how the task is done to standard and explain step-by-step how to do the task. Give each soldier one chance to do the task step-by-step.

(6) Emphasize training at mission-oriented protection posture (MOPP) level 4. Soldiers may have difficulty performing even the very simple tasks in a nuclear/chemical environment. The combat effectiveness of the soldier and the unit can degrade quickly when trying to perform in MOPP4. Practice is the best way to improve and ensure performance.

(7) Check each soldier. Evaluate how well each soldier performs the tasks in this manual. Conduct these evaluations during individual training sessions or while evaluating soldier proficiency during the conduct of unit collective tasks. Use the information in the MTP as a guide to determine how often to train the soldier in each task to ensure that soldiers sustain proficiency.

(8) Record the results. The leader book referred to in FM 25-101, Appendix B, is used to record task performance and gives the leader total flexibility on the method of recording training. The trainer may use DA Forms 5164-R (Hands-On Evaluation) and 5165-R (Field Expedient Squad Book) as part of the leader book.

(a) The trainer may use DA Form 5164-R to keep a record of the performance steps a soldier passes or fails. This form applies to all tasks in this manual and is locally reproducible. This form and instructions for its use are shown in Appendix A.

(b) The trainer may use DA Form 5165-R to record hands-on GO/NO-GO results for a group of soldiers (for example, crew, section, squad) with the same MOS/SL. The trainer may use this form, which supports the commander's evaluations, to show training results gathered in the field for all MOSs/SLs. This form and instructions for its use are shown in Appendix B.

(c) If the trainer chooses to use optional DA Form 5164-R or DA Form 5165-R to record results of soldiers' performance, he must update each individual soldier's leader book as soon as possible.

(d) DA Forms 5164-R and 5165-R are optional and locally reproducible. STP 21-24-SMCT also contains a copy of the forms and instructions for their use.

(9) Retrain and evaluate. Work with each soldier until he can perform the task to specific SM standards.

2-5. EVALUATION GUIDE

An evaluation guide exists for each task summary in the SM. Each evaluation guide contains one or more performance measures that identify what the trainer needs to observe to score a soldier's performance. Each step is clearly identified by a GO and NO GO, located under the result column on each evaluation guide. Some tasks involve a process that the trainer must evaluate an "end product" resulting from doing the task. The following are some general points about using the evaluation guide to evaluate soldiers.

(1) Review the guide to become familiar with the information on which the soldier will be scored.

(2) Ensure that the necessary safety equipment and clothing needed for proper performance of the job are on hand at the training site.

(3) Prepare the test site according to the Conditions section of the task summary. Some tasks contain special evaluation preparation instructions. These instructions tell the trainer what modifications must be made to the job conditions to evaluate the task. Reestablish the test site to the original requirements after evaluating each soldier to ensure that conditions are the same for each soldier.

(4) Advise each soldier of the information in the Brief Soldier section of the task summary before evaluating.

(5) Score each soldier according to the performance measures and Evaluation Guidance section in the task summary.

(6) Record the date and task performance (GO or NO GO) in the leader book.

2-6. TRAINING TIPS FOR THE TRAINER

a. Prepare yourself.

(1) Get training guidance from your chain of command on when to train, which soldiers to train, availability of resources, and training site.

(2) Get the training objective (tasks, conditions, and standards) from the task summary in this manual.

(3) Ensure you can do the task. Review the task summary and references in the References section. Practice doing the task or, if necessary, have someone train you on the task.

(4) Choose a training method. Some tasks provide recommended training methods.

(5) Prepare a training outline consisting of informal notes on what you want to cover during your training session.

(6) Practice your training presentation.

b. Prepare the resources.

(1) Obtain the required resources identified in the Conditions statement for each task.

(2) Gather equipment and ensure it is operational.

(3) Coordinate the use of training aids and devices.

(4) Prepare the training site according to the Conditions statement and Evaluation Preparation section of the task summary, as appropriate.

c. Prepare the soldiers.

(1) Tell the soldier what task to do and how well it must be done. Refer to the Standards statement and Evaluation Preparation section for each task, as appropriate.

(2) Caution soldiers about safety, environment, and security.

(3) Provide any necessary training on basic skills that soldiers must have before they can be trained on the task.

(4) Pretest each soldier to determine who needs training in what areas by having the soldier perform the task. Use DA Form 5164-R and the evaluation guidance in each task summary to make this determination.

d. Train the soldiers who failed the pretest.

(1) Demonstrate how to do the task or the specific performance steps to those soldiers who could not perform to SM standards. Have soldiers study the appropriate materials.

(2) Have soldiers practice the task until they can perform it to SM standards.

(3) Evaluate each soldier using the evaluation guide.

(4) Provide feedback to those soldiers who fail to perform it to SM standards and have them continue to practice until they can perform to SM standards.

e. Record results in the leader book.

2-7. MOS TRAINING PLAN

One of the key components of the TG is the MTP. The MTP has two parts to assist the commander in preparing a unit-training plan, which satisfies integration, cross-train, train-up, and sustainment training requirements for soldiers in this MOS.

(1) Part One of the MTP shows the relationship of an MOS SL between duty position and critical tasks. The critical tasks are grouped by task commonality into subject areas.

(a) Section I list subject area numbers and titles used throughout the MTP. The subject areas define the training requirements for each duty position within an MOS and relate duty positions to subject areas and cross-training and train-up/merger requirements.

MOS TRAINING PLAN MOS 31U PART ONE: SUBJECT AREAS AND DUTY POSITIONS	
SECTION 1. SUBJECT AREA CODES	
Skill Levels 1/2	Skill Level 3
1. Test, Measurement, and Diagnostic Equipment (TMDE) 2. Commercial-off-the-Shelf (COTS) Computers 3. Tactical Computers 4. Very High Frequency Radios 5. Retransmission Stations (RETRANS) 6. Tactical Satellite Equipment 7. Communications Systems 8. Facsimile Equipment 9. Communications Security Equipment 10. High/Ultra High Frequency Radios 11. Mobile Subscriber Equipment (MSE)	2. Commercial-off-the-Shelf (COTS) Computers 4. Very High Frequency Radios 6. Tactical Satellite Equipment 10. High/Ultra High Frequency Radios 12. Combat Communications Planning 13. Signal Maintenance Administration Skill Level 4 12. Combat Communications Planning 14. Signal Support Plans and Operations

MOS TRAINING PLAN MOS 31U PART ONE				
SECTION II. DUTY POSITION TRAINING REQUIREMENTS				
SL	DUTY POSITION	SUBJECT AREAS	CROSS-TRAIN	TRAIN-UP MERGER
SL1	Radio Retransmission Operator	4-7, 10	Signal Support Systems Maintainer	31U20 – Radio Retransmission Systems Team Chief
			Signal Support Systems Specialist	
			Signal Information Service Specialist	
			Forward Signal Support Specialist	
	Signal Support Systems Maintainer	1-11	Signal Support Systems Specialist	31U20 – Senior Signal Support Maintainer
			Signal Information Service Specialist	
			Forward Signal Support Specialist	
			Radio Retransmission Operator	
	Signal Support Systems Specialist	1-11	Signal Information Service Specialist	31U20 – Forward Signal Support NCO
			Forward Signal Support Specialist	
			Radio Retransmission Operator	
			Signal Support Systems Maintainer	
	Signal Information Service Specialist	1-11	Forward Signal Support Specialist	31U20 – Forward Signal Support NCO
			Radio Retransmission Operator	
			Signal Support Systems Maintainer	
			Signal Support Systems Specialist	
	Forward Signal Support Specialist	1-11	Radio Retransmission Operator	31U20 – Forward Signal Support NCO
			Signal Support Systems Specialist	
			Signal Information	

			Service Specialist	
SL2	Radio Retransmission Systems Team Chief	1-11	Senior Signal Support Systems Maintainer	31U30 – Radio Retransmission Supervisor
	Senior Signal Support Systems Maintainer	1-11	Forward Signal Support NCO	31U30 – Signal Support Systems Supervisor
	Forward Signal Support NCO	1-11	Radio Retransmission Systems Team Chief	31U30 – Forward Signal Support NCO
			Senior Signal Support Systems Maintainer	
SL3	Radio Retransmission Supervisor/Signal Support Systems Supervisor	2, 4, 6, 10, 12, 13	Forward Signal Support NCO/Section Chief	31U40 – Section Chief
	Forward Signal Support NCO/Section Chief	2, 4, 6, 10, 12, 13	Radio Retransmission Supervisor/Signal Support Systems Supervisor	31U40 – Platoon Sergeant
SL4	Section Chief/Platoon Sergeant	12, 14	NA	31U50 – Signal Support Systems Chief

2-1. General. The MOS Training Plan (MTP) identifies the essential components of a unit training plan for individual training. Units have different training needs and requirements based on differences in environment, location, equipment, dispersion, and similar factors. Therefore, the MTP should be used as a guide for conducting unit training and not a rigid standard. The MTP consists of two parts. Each part is designed to assist the commander in preparing a unit training plan which satisfies integration, cross training, training up, and sustainment training requirements for soldiers in this MOS.

Part One of the MTP shows the relationship of an MOS skill level between duty position and critical tasks. These critical tasks are grouped by task commonality into subject areas.

Section I lists subject area numbers and titles used throughout the MTP. These subject areas are used to define the training requirements for each duty position within an MOS.

Section II identifies the total training requirement for each duty position within an MOS and provides a recommendation for cross training and train-up/merger training.

- **Duty Position column.** This column lists the duty positions of the MOS, by skill level, which have different training requirements.
- **Subject Area column.** This column lists, by numerical key (see Section I), the subject areas a soldier must be proficient in to perform in that duty position.
- **Cross Train column.** This column lists the recommended duty position for which soldiers should be cross trained.
- **Train-up/Merger column.** This column lists the corresponding duty position for the next higher skill level or MOSC the soldier will merge into on promotion.

Part Two lists, by general subject areas, the critical tasks to be trained in an MOS and the type of training required (resident, integration, or sustainment).

- **Subject Area column.** This column lists the subject area number and title in the same order as Section I, Part One of the MTP.
- **Task Number column.** This column lists the task numbers for all tasks included in the subject area.
- **Title column.** This column lists the task title for each task in the subject area.
- **Training Location column.** This column identifies the training location where the task is first trained to soldier training publications standards. If the task is first trained to standard in the unit, the word "Unit" will be in this column. If the task is first trained to standard in the training base, it will identify, by brevity code (ANCOC, BNCOC, etc.), the resident course where the task was taught. Figure 2-1 contains a list of training locations and their corresponding brevity codes.

ANCOC	Advanced NCO Course
AIT	Advanced Individual Training
BNCOC	Basic NCO Course
UNIT	Trained in the Unit

Figure 2-1. Training Locations

- **Sustainment Training Frequency column.** This column indicates the recommended frequency at which the tasks should be trained to ensure soldiers maintain task proficiency. Figure 2-2 identifies the frequency codes used in this column.

BA	- Biannually
AN	- Annually
SA	- Semiannually
QT	- Quarterly
MO	- Monthly
BW	- Bi-weekly
WK	- Weekly

Figure 2-2. Sustainment Training Frequency Codes

- **Sustainment Training Skill Level column.** This column lists the skill levels of the MOS for which soldiers must receive sustainment training to ensure they maintain proficiency to soldier's manual standards.

2-2. Subject Area Codes.**Skill Level 1**

- 1 Test, Measurement, and Diagnostic Equipment (TMDE)
- 2 Commercial-off-the-Shelf (COTS) Computers
- 3 Tactical Computers
- 4 Very High Frequency Radios
- 5 Retransmission Stations (RETRANS)
- 6 Tactical Satellite Equipment
- 7 Communications Systems
- 8 Facsimile Equipment
- 9 Communications Security Equipment
- 10 High/Ultra High Frequency Radios
- 11 Mobile Subscriber Equipment (MSE)

Skill Level 3

- 2 Commercial-off-the-Shelf (COTS) Computers
- 4 Very High Frequency Radios
- 6 Tactical Satellite Equipment
- 10 High/Ultra High Frequency Radios
- 12 Combat Communications Planning
- 13 Signal Maintenance Administration

Skill Level 4

- 12 Combat Communications Planning
- 14 Signal Support Plans and Operations

2-3. Duty Position Training Requirements.

2-4. Critical Tasks List.**MOS TRAINING PLAN
31U14****CRITICAL TASKS**

Subject Area	Task Number	Title	Training Location	Sustaining Freq	Sustaining SL
Skill Level 1					
1. Test, Measurement, and Diagnostic Equipment (TMDE)	113-574-3008	Perform Unit Level Maintenance (ULM) on Assigned Signal Support Systems TMDE	AIT	MO	1-4
2. Commercial-off-the-Shelf (COTS) Computers	113-580-0051	Troubleshoot a Desktop IBM or Compatible Microcomputer	AIT	MO	1-4
	113-580-1032	Configure a Desktop IBM or Compatible Microcomputer for Operation	AIT	MO	1-4
	113-580-1033	Install Network Hardware/Software in a Desktop IBM or Compatible Microcomputer	AIT	MO	1-4
	113-580-3069	Perform Unit Level Maintenance (ULM) on a Desktop IBM or Compatible Microcomputer	AIT	MO	1-4
3. Tactical Computers	113-580-0052	Troubleshoot Common Hardware/Software Within a Standardized Integrated Command Post System (SICPS)	AIT	MO	1-4
	113-580-0053	Troubleshoot a Tactical Local Area Network (LAN)	AIT	MO	1-4
	113-580-0055	Troubleshoot Force XXI Battle Command Brigade and Below (FBCB2)	AIT	MO	1-4
	113-580-1035	Install a Tactical Local Area Network (LAN)	AIT	MO	1-4
	113-580-1055	Install Force XXI Battle Command Brigade and Below (FBCB2)	AIT	MO	1-4
	113-580-3070	Perform Scheduled Unit Level Maintenance (ULM) on Common Hardware/Software (CHS) Within a Standardized Integrated Command Post System (SICPS)	AIT	MO	1-4
	113-580-3075	Perform Unit Level Maintenance on Force XXI Battle Command Brigade and Below (FBCB2)	AIT	MO	1-4
4. Very High Frequency Radios	113-587-0068	Troubleshoot Secure AN/GRC-160 Radio Sets With or Without the AN/VIC-1	UNIT	MO	1-4

CRITICAL TASKS

Subject Area	Task Number	Title	Training Location	Sust Tng Freq	Sust Tng SL
Radios	113-587-0070	Troubleshoot Secure Single-Channel Ground and Airborne Radio Systems (SINCGARSS) ICOM With or Without the AN/VIC-1 or AN/VIC-3	AIT	MO	1-4
	113-587-0071	Troubleshoot Secure AN/VRC-12 Series Radio Sets With or Without the AN/VIC-1	UNIT	MO	1-4
	113-587-0074	Troubleshoot Radio Set AN/PRC-127	UNIT	MO	1-4
	113-587-1065	Install Secure AN/GRC-160 Radio Sets With or Without the AN/VIC-1	UNIT	MO	1-4
	113-587-1067	Install Single-Channel Ground and Airborne Radio Systems (SINCGARSS) ICOM With or Without the AN/VIC-1 or AN/VIC-3	AIT	MO	1-4
	113-587-1068	Install Secure AN/VRC-12 Series Radio Sets With or Without the AN/VIC-1	UNIT	MO	1-4
	113-587-1071	Install Multiplexer TD-1456/VRC	UNIT	MO	1-4
	113-587-2084	Program Radio Set AN/PRC-127	UNIT	MO	1-4
	113-587-3111	Perform Scheduled Unit Level Maintenance (ULM) on Secure AN/GRC-160 Radio Sets With or Without the AN/VIC-1	UNIT	MO	1-4
	113-587-3114	Perform Scheduled Unit Level Maintenance (ULM) on Secure AN/VRC-12 Series Radio Sets With or Without the AN/VIC-1	UNIT	MO	1-4
	113-587-3117	Perform Unit Level Maintenance (ULM) on Radio Set AN/PRC-127	UNIT	MO	1-4
5. Retransmission Stations (RETRANS)	113-587-2081	Operate Secure AN/VRC-49 RETRANS	UNIT	MO	1-4
	113-587-2082	Operate Secure AN/VRC-92 RETRANS	AIT	MO	1-4
	113-587-2083	Operate Secure Tactical Satellite (TACSAT) RETRANS Using the AN/PSC-7	UNIT	MO	1-4
	113-587-2085	Operate Secure Tactical Satellite (TACSAT) RETRANS Using the AN/PSC-5	AIT	MO	1-4
6. Tactical Satellite Equipment	113-589-0043	Troubleshoot Secure Tactical Satellite Communications (TACSATCOM) Radio Set AN/VSC-7 or a Similar TACSATCOM Radio Set	AIT	MO	1-4
	113-589-0044	Troubleshoot Precision Lightweight Global Positioning System Receiver (PLGPS)	AIT	MO	1-4

CRITICAL TASKS

Subject Area	Task Number	Title	Training Location	Sustaining Frequency	Sustaining SL
	113-589-0045	Positioning System Receiver (PLGR) Troubleshoot Single-Channel Demand Assigned Multiple Access (DAMA) Tactical Satellite Terminal AN/PSC-5	AIT	MO	1-4
	113-589-0046	Troubleshoot Single-Channel Anti-Jam Man Portable (SCAMP) Tactical Satellite Terminal AN/PSC-11	AIT	MO	1-4
	113-589-1009	Install Secure AN/VSC-7 or a Similar TACSATCOM Radio Set	AIT	MO	1-4
	113-589-1010	Install Precision Lightweight Global Positioning System Receiver (PLGR)	UNIT	MO	1-4
	113-589-3032	Perform Scheduled Unit Level Maintenance (ULM) on Secure Tactical Satellite Communications (TACSATCOM) Radio Set AN/VSC-7 or a Similar TACSATCOM Radio Set	AIT	MO	1-4
	113-589-3043	Perform Unit Level Maintenance (ULM) on Precision Lightweight Global Positioning System Receiver (PLGR)	UNIT	MO	1-4
	113-589-3045	Perform Scheduled Unit Level Maintenance (ULM) on Single-Channel Demand Assigned Multiple Access (DAMA) Tactical Satellite Terminal AN/PSC-5	AIT	MO	1-4
	113-589-3046	Perform Scheduled Unit Level Maintenance (ULM) on Single Channel Anti-Jam Man Portable (SCAMP) Tactical Satellite Terminal AN/PSC-11	AIT	MO	1-4
7. Communications Systems	113-580-0054	Troubleshoot Communications Equipment Within the Standardized Integrated Command Post System (SICPS)	AIT	MO	1-4
	113-580-3071	Perform Unit Level Maintenance (ULM) on Communications Equipment Within the Standardized Integrated Command Post System (SICPS)	AIT	MO	1-4
	113-596-3051	Perform Scheduled Unit Level Maintenance (ULM) on Antenna Group OE-254/GRC or a Similar Antenna System	AIT	MO	1-4
8. Facsimile Equipment	113-597-0002	Troubleshoot Tactical Lightweight Digital Facsimile (LDF) AN/UXC-7 or a Similar System	AIT	MO	1-4
	113-597-1002	Install Tactical Lightweight Digital Facsimile (LDF) AN/UXC-7 or a Similar System	AIT	MO	1-4
	113-597-3002	Perform Scheduled Unit Level Maintenance (ULM) on Tactical Lightweight Digital Facsimile	AIT	MO	1-4

CRITICAL TASKS

Subject Area	Task Number	Title	Training Location	Sust Tng Freq	Sust Tng SL
		(LDF) AN/UXC-7 or a Similar System			
9. Communications Security Equipment	113-609-4007	Restore to Operation Automated Net Control Device (ANCD) AN/CYZ-10 or Equivalent Equipment	AIT	MO	1-4
10. High/Ultra High Frequency Radios	113-620-0107	Troubleshoot Improved High Frequency Radio (IHFR) Set AN/GRC-213 or a Similar System	AIT	MO	1-4
	113-620-1040	Install Improved High Frequency Radio (IHFR) Set AN/GRC-213 or a Similar System	AIT	MO	1-4
	113-620-3059	Perform Scheduled Unit Level Maintenance (ULM) on Improved High Frequency Radio (IHFR) Set AN/GRC-213 or a Similar System	AIT	MO	1-4
	113-630-0005	Troubleshoot Enhanced Position Location Reporting System (EPLRS) Radio Set AN/VSQ-2(V)1/(V)2	AIT	MO	1-4
	113-630-1008	Install Enhanced Position Location Reporting System (EPLRS) Radio Set AN/VSQ-2(V)1/(V)2	AIT	MO	1-4
	113-630-3015	Perform Scheduled Unit Level Maintenance (ULM) on Enhanced Position Location Reporting System (EPLRS) Radio Set AN/VSQ-2(V)2	AIT	MO	1-4
11. Mobile Subscriber Equipment (MSE)	113-625-0029	Troubleshoot Mobile Subscriber Radiotelephone Terminal (MSRT) AN/VRC-97 System	AIT	MO	1-4
	113-625-1038	Install Mobile Subscriber Radiotelephone Terminal (MSRT) AN/VRC-97	AIT	MO	1-4
	113-625-3030	Perform Scheduled Unit Level Maintenance (ULM) on Mobile Subscriber Radiotelephone Terminal (MSRT) AN/VRC-97	AIT	MO	1-4
Skill Level 3					
2. Commercial-off-the-Shelf (COTS) Computers	113-580-7002	Restore Tactical Automated Information Systems	BNCOC	MO	3-4
	113-580-7126	Direct Implementation of a Tactical Local Area Network (TACLAN)	BNCOC	MO	3-4

CRITICAL TASKS

Subject Area	Task Number	Title	Training Location	Sust Tng Freq	Sust Tng SL
4. Very High Frequency Radios	113-587-7133	Direct Implementation of an FM Voice Data Communications Network	BNCOC	MO	3-4
6. Tactical Satellite Equipment	113-589-7120	Direct Implementation of a Single-Channel Tactical Satellite Communications Network	BNCOC	MO	3-4
10. High/Ultra High Frequency Radios	113-620-7089	Direct Implementation of a High Frequency (HF) Communications Network	BNCOC	MO	3-4
12. Combat Communications Planning	113-611-1015	Select a Radio Site	BNCOC	MO	3-4
13. Signal Maintenance Administration	113-615-1002	Provide Input to Materiel Condition Status Report	BNCOC	MO	3-4
	113-623-7162	Prepare Unit Level Communications Standard Operating Procedures (SOP)	BNCOC	MO	3-4
	113-623-7196	Perform Quality Control on Unit Level Maintenance (ULM) of Assigned Signal Equipment	BNCOC	MO	3-4
Skill Level 4					
12. Combat Communications Planning	113-611-6002	Plan FM Voice and Data Communications Net	ANCOC	MO	4
	113-611-6003	Plan a Tactical Local Area Network (LAN)/Wide Area Network (WAN) for Brigade and Below	ANCOC	MO	4
	113-611-6004	Plan a Single-Channel Tactical Satellite Communications Network	ANCOC	MO	4
	113-611-6005	Plan an HF Communications Network	ANCOC	MO	4
	113-611-6112	Prepare Input to Signal Annex (Paragraph 5) of the OPORD	ANCOC	MO	4
14. Signal Support Plans and Operations	113-573-8010	Prepare Input to Signal Operation Instructions (SOI) Using Revised Battlefield Electronics CEOI Systems (RBECS) or Equivalent	ANCOC	MO	4
	113-609-2054	Operate Revised Battlefield Electronic CEOI Systems (RBECS) or Equivalent Software	ANCOC	MO	4

CRITICAL TASKS

Subject Area	Task Number	Title	Training Location	Sust Tng Freq	Sust Tng SL
	113-623-4006	Conduct Operational Readiness Inspection of Assigned Signal Equipment	ANCOC	MO	4

CHAPTER 3

MOS/Skill Level Tasks

Skill Level 1

Subject Area 1: Test, Measurement, and Diagnostic Equipment (TMDE)

Perform Unit Level Maintenance (ULM) on Assigned Signal Support Systems TMDE
113-574-3008

Conditions: Given assigned signal support TMDE, digital multimeter AN/PSM-45(*), radio test set AN/PRM-34, tool kit TK-101/G, TM 11-6625-3015-14, and TM 11-6625-3052-14.

Standards: Documented all shortcomings and corrected all deficiencies IAW TM 11-6625-3015-14 and TM 11-6625-3052-14; or evacuated uncorrectable defective lowest repairable units (LRUs) to a higher maintenance level.

Performance Steps

- 1. Identify maintenance to be performed.
- 2. Assemble required material.
- 3. Perform ULM checks and services.
- 4. Take corrective actions as necessary.
 - a. Repair correctable deficiencies and shortcomings.
 - b. Evacuate LRU with uncorrectable deficiencies to a higher maintenance level.
 - (1) Record equipment status.
 - (2) Report status to unit level logistics system (ULLS) clerk.
 - c. Document uncorrected shortcomings.
 - (1) Record actions taken.
 - (2) Schedule next maintenance.

Performance Measures

- 1. Identified maintenance to be performed.
- 2. Assembled required material.
- 3. Performed ULM checks and services.
- 4. Took corrective action as necessary.
 - a. Repaired correctable deficiencies or shortcomings.
 - b. Evacuated LRU with uncorrectable deficiencies to a higher maintenance level.
 - (1) Recorded equipment status.
 - (2) Reported status to the ULLS clerk.
 - c. Documented uncorrected shortcomings.
 - (1) Recorded actions taken.
 - (2) Scheduled next maintenance.

GO NO GO

_____	_____
_____	_____
_____	_____
_____	_____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

TM 11-6625-3015-14

TM 11-6625-3052-14

Related

DA PAM 738-750

TB 43-180

TM 11-6625-3199-14

Subject Area 2: Commercial-off-the-Shelf (COTS) Computers

Configure a Desktop IBM or Compatible Microcomputer for Operation**113-580-1032**

Conditions: Given a central processing unit (CPU), monitor, keyboard, mouse, mouse pad, printer, surge suppressor, Microsoft-Disk Operating System (MS-DOS), Windows Operating System (OS), and application software.

Standards: Displayed and printed text using Notepad or Wordpad.

Performance Steps

1. Prepare for configuration.
 - a. Inventory components from enclosed packing lists.
 - b. Select appropriate site.
 - (1) Enough desktop space for computer and any peripheral devices.
 - (2) Close proximity to electrical connection.
2. Configure the microcomputer.
 - a. Place the CPU in the selected location.
 - (1) Plug the female end of the power cable into the connector on the rear panel of the CPU.
 - (2) Plug the male end into the surge suppressor.
 - b. Place the keyboard in front of the CPU.
 - (1) Plug the keyboard cable into the keyboard connector on the rear panel of the CPU.
 - (2) Adjust the keyboard legs as desired.
 - c. Connect the monitor.
 - (1) Place the monitor on or near the CPU.
 - (2) Connect the monitor power cable to the surge suppressor.
 - (3) Connect the monitor signal cable to the monitor connector on the rear panel of the CPU.
 - (4) Tighten the two screws on the monitor signal cable plug to anchor the cable to the connector.
 - d. Connect printer.
 - (1) Connect printer interface cable to the printer connector on the rear panel of the printer.
 - (2) Connect the opposite end of the printer interface cable to a printer connector on the back panel of the CPU.
 - (3) Tighten the two screws of the printer interface cable to anchor the cable to the connector.
 - (4) Connect the printer power cable to the surge suppressor.
 - (5) Set up printer paper.
 - e. Connect mouse.
 - (1) Connect the mouse to the appropriate serial port.
 - (2) Tighten the two screws on the cable plug to anchor the cable to the connector.
 - (3) Place the mouse pad next to the keyboard and set the mouse on it.
 - f. Connect AC power.
 - (1) Ensure the system power switch and surge suppressor switches are set to OFF.
 - (2) Ensure that the CPU line voltage selection switch is set to the proper voltage.
 - (3) Plug surge suppressor into the AC outlet.
3. Set up the system.
 - a. Apply power to the system.
 - b. If no operating system was factory installed, install the operating system.
 - c. Install application software.
4. Test the system.
 - a. Create text in Notepad or Wordpad.
 - b. Save and print text.

Performance Measures

1. Prepared for configuration.
2. Configured the microcomputer.
3. Set up the system.
4. Tested the system.

GO **NO GO**

_____	_____
_____	_____
_____	_____
_____	_____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required
DOS MANUAL
WUM

Related
CUM
MOM
PUM

Install Network Hardware/Software in a Desktop IBM or Compatible Microcomputer
113-580-1033

Conditions: Given an operational IBM or compatible microcomputer, network interface card, network cable, T-connector, terminator, electrostatic discharge (ESD) wriststrap, network software, local area network (LAN), cable splicing kit, tool kit TK-101/G, Network Software User's Manual (NSUM), and Network Card Installation Manual (NCIM).

Standards: Entered the computer into the network, sent a test E-mail, and received a reply.

Performance Steps

1. Prepare for installation.
WARNING: Circuit card assemblies are sensitive to ESD. Wear an ESD wriststrap whenever the CPU cover is removed.
 - a. Collect all required materials.
 - b. Quit all applications and shutdown the system.
 - c. Turn power off and unplug power cord.
 - d. Remove the CPU cover.
 - e. Select an unused expansion slot.
 - f. Determine bus expansion slot compatibility with the network card.
 - (1) Industry standard architecture (ISA), 8- or 16-bit bus.
 - (2) Peripheral component interconnect (PCI), 32- or 64 bit-bus
2. Configure a network card. (Refer to the NCIM to determine settings)
3. Install a network card.
 - a. Remove the cover from the rear slot and save the screw for a later use.WARNING: Do not touch the gold contacts on the bottom of the network card.
 - b. Remove the network card from its protective wrapping.
 - c. Align the bottom of the card (gold contacts) with the selected slot and press down firmly.
 - d. Anchor the card in place with the screw removed in step 3a above.
 - e. Replace the CPU cover.
 - f. Restore power to the CPU.
4. Connect the computer to the network. (Refer to the NCIM to determine cable installation.)
5. Install network software. (Refer to the NSUM for installation instructions.)
6. Create an E-mail account. (Refer to the NSUM.)
7. Send an E-mail message. (Refer to the NSUM.)
8. Receive an E-mail message. (Refer to the NSUM.)

Performance Measures

1. Prepared for installation.
WARNING: Circuit card assemblies are sensitive to ESD. Wear an ESD wriststrap whenever the CPU cover is removed.
 - a. Collected all required materials.
 - b. Quit all applications and shutdown the system.
 - c. Turned off power and unplugged the power cord.
 - d. Removed the CPU cover.
 - e. Selected an unused bus expansion slot.
 - f. Determined bus expansion slot compatibility with the network card. (See Figure 3-1.)

<u>GO</u>	<u>NO GO</u>
_____	_____

Performance Measures**GO** **NO GO**

- (1) ISA, 8- or 16-bit bus.
- (2) PCI, 32- or 64-bit bus.

2. Configured a network card. (Refer to the NCIM to determine settings.)	_____	_____
3. Installed the network card.	_____	_____
a. Removed the cover from the rear slot and saved the screw for later use.		
WARNING: Do not touch the gold contacts on the bottom of the network card.		
b. Removed the network card from its protective wrapping.		
c. Aligned the bottom of the card (gold contacts) with the selected slot and pressed down firmly.		
d. Anchored the card in place with the screw removed in step 3a.		
e. Replaced the CPU cover.		
f. Restored power to the CPU.		
4. Connected the computer to the network. (Refer to the NCIM to determine cable installation.)	_____	_____
5. Installed network software. (Refer to the NSUM for installation instructions.)	_____	_____
6. Created an E-mail account. (Refer to the NSUM.)	_____	_____
7. Sent an E-mail message. (Refer to the NSUM.)	_____	_____
8. Received an E-mail message. (Refer to the NSUM.)	_____	_____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References**Required**

NCIM
NSUM

Related

CUM
WUM

Troubleshoot a Desktop IBM or Compatible Microcomputer
113-580-0051

Conditions: Given an inoperable desktop IBM or compatible microcomputer in a network or stand-alone configuration, Computer User's Manual (CUM), Network Hardware User's Manual (NHUM), Applications Software User's Manual (ASUM), Network Software User's Manual (NSUM), and tool kit TK-101/G.

Standards: The computer processed data; or evacuated the computer to a higher maintenance level.

Performance Steps

1. Verify reported malfunctions.
2. Perform systematic troubleshooting procedures. (Refer to the CUM, NHUM, NSUM, or ASUM.)
3. Correct the LRU within unit level authorization.
 - a. Test the LRU.
 - b. Repair the LRU.
 - c. Replace unserviceable parts.
 - d. Perform an operational check.
 - e. Requisition unserviceable parts not on hand.
4. Correct the LRU outside unit level authorization.
 - a. Document actions taken.
 - b. Return DA Form 5988-E and obtain DA Form 5990-E from the ULLS clerk.
 - c. Evacuate defective LRU outside of maintenance allocations authorization to a higher maintenance level.

Performance Measures

	<u>GO</u>	<u>NO GO</u>
1. Verified reported malfunctions.	—	—
2. Performed systematic troubleshooting procedures. (Refer to the CUM, NHUM, NSUM, or the ASUM.)	—	—
3. Corrected the LRU within unit level authorization. <ol style="list-style-type: none">a. Tested the LRU.b. Repaired the LRU.c. Replaced unserviceable parts.d. Performed an operational test.e. Requisitioned unserviceable parts not on hand.	—	—
4. Corrected the LRU outside unit level authorization. <ol style="list-style-type: none">a. Documented actions taken.b. Returned DA Form 5988-E and obtained DA Form 5990-E from the ULLS clerk.c. Evacuated the defective LRU outside of the maintenance allocation authorization to a higher maintenance level.	—	—

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required
ASUM

Related
DA PAM 738-750

References

Required

CUM
NHUM
NSUM

Related

FM 24-7

Perform Unit Level Maintenance (ULM) on a Desktop IBM or Compatible Microcomputer
113-580-3069

Conditions: Given an operational desktop IBM or compatible microcomputer, peripheral devices, MS-DOS Version 3.0 or later, tool kit TK-101/G, canned air, handheld vacuum cleaner, ESD wriststrap, and 3.5-inch floppy disk.

Standards: Checked the hard disk for errors and defragmented and backed up; and peripheral devices passed the self-test or successfully completed the diagnostic programs.

Performance Steps

1. Collect all required material.
2. Initiate maintenance forms.
3. Maintain peripheral devices.
 - a. Inspect devices and connector cables for cracks, holes, and fraying.
 - b. Vacuum paper residue from inside printer.
4. Maintain the CPU.
 - a. Quit all applications including WINDOWS and return to DOS prompt.
 - b. Turn off power and unplug power cord.

WARNING: Circuit card assemblies are sensitive to ESD. Ensure that an ESD wriststrap is worn whenever the CPU cover is removed.

 - c. Remove the CPU cover.
 - d. Spray canned air to remove dust from all internal parts.
 - e. Check all cards and connectors for proper seating.
 - f. Replace the CPU cover.
 - g. Test floppy disk drives for accepting and ejecting floppy disks.
 - h. Restore power to the CPU.

WARNING: Do not run CheckDisk on a network drive. Do not run ScanDisk while other programs are running.
5. Maintain the hard disk drive. (Use the appropriate operating system manual or hard disk management tools software manual.)
 - a. Check for hard disk errors.
 - b. Defragment hard disk.
 - c. Verify current anti-virus software is installed.
 - d. Perform backup.
6. Complete appropriate documentation.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Collected all required material.	_____	_____
2. Initiated maintenance forms.	_____	_____
3. Maintained peripheral devices.	_____	_____
4. Maintained the CPU.	_____	_____
5. Maintained the hard disk drive.	_____	_____
6. Completed appropriate documentation.	_____	_____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

Related

ASUM

CUM

DA PAM 738-750

MS-DOS MANUAL

Subject Area 3: Tactical Computers

Install Force XXI Battle Command Brigade and Below (FBCB2)
113-580-1055

Conditions: Given FBCB2 hardware, TM 11-7010-326-10, TM 11-7010-326 -20&P, installation kit, multimeter AN/PSM-45(*), TK-101/G, SB 11-131-2, DA PAM 738-750, Contract Data Requirements List GO17 FBCB2 Unit Maintenance Manual (CDRL GO17 FBCB2 UMM), and DA Form 5988-E.

Standards: Installed the FBCB2 IAW SB 11-131-2 and sent and received a test message.

Evaluation Preparation: Ensure adequate resources are available.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Reviewed the tactical Internet (TI) chart.	_____	_____
a. Identified system type.		
b. Identified assigned unit requirement number (URN).		
c. Identified required resources.		
2. Inventoried installation kit. (Refer to SB11-131-2.)	_____	_____
3. Mounted system components IAW CDRL GO17 FBCB2 UMM.	_____	_____
a. Placed stipulated equipment.		
b. Connected all hardware/peripherals.		
4. Initialized the systems.	_____	_____
a. Powered up the AN/PSN-11 Precision Lightweight Global Positioning System Receiver (PLGR).		
b. Powered up the Enhanced Position Location Reporting System (EPLRS) if installed.		
c. Powered up the Single-Channel Ground and Airborne Radio System (SINCGARS) radio sets.		
d. Verified device operation.		
e. Powered up the AN/UYK-128 applique.		
5. Configured the applique with the URN.	_____	_____
a. Entered system administration from the session manager.		
b. Inputted the URN from the TI chart.		
6. Performed an operational check.	_____	_____
a. Sent a test message to all addressees.		
b. Received an acknowledgment from all addressees.		
7. Established maintenance records IAW DA PAM 738-750.	_____	_____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References**Required**

CDRL GO17 FBCB2 UMM
 DA PAM 738-750
 DTM 11-7010-326-10
 DTM 11-7010-326-20&P

Related

GPS-DC MK III OSM
 TSP 113-587-1067

References

Required

SB 11-131-2

Related

Troubleshoot Force XXI Battle Command Brigade and Below (FBCB2)
113-580-0055

Conditions: Given an inoperable FBCB2 system in a network, TM 11-7010-326-20&P, AN/PSM-45(*), TK-101, DA Form 5988-E, and DA Form 5990E.

Standards: Corrected all deficiencies IAW TM 11-7010-326-20&P and documented all shortcomings; or evacuated the equipment that had a major deficiency beyond unit maintenance level to a higher maintenance level.

Performance Steps

1. Verify reported malfunction.
 - a. Review operator's actions.
 - b. Perform visual inspection.
 - c. Perform preliminary servicing and adjustment checks.
2. Perform systematic troubleshooting procedures.
 - a. Zeroize radio set.
 - b. Reload radio set.
 - c. Isolate defect to the LRU.
3. Take corrective actions.
 - a. Fix or replace the defective LRU.
 - b. Evacuate the defective LRU to a higher maintenance level.
 - (1) Process for a higher maintenance level.
 - (2) Prepare maintenance records.

Evaluation Preparation: Ensure adequate resources are available.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Verified reported malfunction. <ol style="list-style-type: none">a. Reviewed operator's actions.b. Performed visual inspection.c. Performed preliminary servicing and adjustment checks.	_____	_____
2. Performed systematic troubleshooting procedures. <ol style="list-style-type: none">a. Zeroized radio set.b. Reloaded radio set.c. Isolated defect to the LRU.	_____	_____
3. Took corrective actions. <ol style="list-style-type: none">a. Fixed or replaced the defective LRU.b. Evacuated the defective LRU to a higher maintenance level.<ol style="list-style-type: none">(1) Processed for a higher maintenance level.(2) Prepared maintenance records.	_____	_____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required	Related
DTM 11-7010-326-20&P	DA PAM 738-750

References

Required

TSP 113-587-1067

Related

DTM 11-7010-326-10

TM 11-5820-890-10

TM 11-5825-283-10

TM 11-5825-291-13

Perform Unit Level Maintenance on Force XXI Battle Command Brigade and Below (FBCB2)
113-580-3075

Conditions: Given an FBCB2 system configured in a network, digital multimeter AN/PSM-45(*), tool kit TK-101/G, TM 11-7010-326-20&P, TM 11-5825-283-23, and DA Form 5986-E.

Standards: Corrected all deficiencies IAW TM 11-7010-326-20&P and documented all shortcomings; or evacuated the equipment that had a major deficiency beyond unit maintenance level to a higher maintenance level.

Performance Steps

1. Identify ULM required.
2. Verify operator's PMCS.
3. Perform ULM checks and services. (Refer to TM 11-5825-283-23.)
 - a. Check receiver-transmitter (RT) keep-alive battery.
 - b. Perform self-test to ensure the unit passes the -N message response test.
4. Take corrective actions.
 - a. Repair correctable deficiencies. (Refer to the maintenance allocation chart (MAC).)
 - b. Evacuate the LRUs with uncorrectable deficiencies to a higher maintenance level.
 - (1) Record equipment status.
 - (2) Report status to the ULLS clerk.
 - c. Document uncorrected shortcomings.
 - (1) Record actions taken.
 - (2) Schedule next maintenance.

Evaluation Preparation: Ensure adequate resources are available.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Identified ULM required.	_____	_____
2. Verified operator's PMCS.	_____	_____
3. Performed ULM checks and services. (Refer to TM 11-5825-283-23.) <ol style="list-style-type: none">a. Checked RT keep-alive battery.b. Performed self-test to ensure the unit passed the -N message response test.	_____	_____
4. Took corrective actions. <ol style="list-style-type: none">a. Repaired correctable deficiencies. (Refer to the MAC.)b. Evacuated the LRUs with uncorrectable deficiencies to a higher maintenance level.<ol style="list-style-type: none">(1) Recorded equipment status.(2) Reported status to the ULLS clerk.c. Documented uncorrected shortcomings.<ol style="list-style-type: none">(1) Recorded actions taken.(2) Scheduled next maintenance.	_____	_____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

DTM 11-7010-326-20&P
TM 11-5825-283-23

Related

DA PAM 738-750
TSP 113-587-1067

Troubleshoot Common Hardware/Software Within a Standardized Integrated Command Post System (SICPS)
113-580-0052

Conditions: Given defective common hardware in an SICPS with CHS and serviceable communications systems, maintenance and diagnostics (M&D) software, Battlefield Functional Area Control System (BFACS) software, digital multimeter AN/PSM-45(*), tool kit TK-101/G, TM 11-7010-256-12&P for the tracked command post (M1068) version or TM 11-7010-258-12&P for the soft-top command post (STCP) version or TM 11-7010-260-12&P for the rigid wall shelter (RWS) version, DA Form 5988-E with one or more faults listed, and DA Form 5990-E.

Standards: Made the CHS operational IAW TM 11-7010-256-12&P or TM 11-7010-258-12&P or TM 11-7010-260-12&P; or evacuated the defective LRU to a higher maintenance level.

Performance Steps

1. Verify reported malfunctions.
 - a. Check for correct hardware installation.
 - b. Verify operator's troubleshooting procedures.
2. Isolate malfunction. (Refer to TM 11-7010-256-12&P for the M1068 version, TM 11-7010-258-12&P for the STCP version, and TM 11-7010-260-12&P for the RWS version.)
 - a. Perform on-line diagnostics procedures.
 - b. Perform off-line diagnostics procedures.
 - c. Consult symptom index.
 - d. Refer to the troubleshooting flowchart.
3. Correct the LRU within unit level authorization.
 - a. Test the LRU.
 - b. Repair the LRU.
 - c. Replace unserviceable parts.
 - d. Perform an operational test.
 - e. Requisition unserviceable parts not on hand.
4. Correct the LRU outside unit level authorization.
 - a. Document actions taken.
 - b. Return DA Form 5988-E and obtain DA Form 5990-E from the ULLS clerk.
 - c. Evacuate the defective LRU outside of the maintenance allocation authorization to a higher maintenance level.

Performance Measures

	<u>GO</u>	<u>NO GO</u>
1. Verified reported malfunctions.	—	—
a. Checked for correct hardware installation.		
b. Verified operator's troubleshooting procedures.		
2. Isolated malfunction. (Refer to TM 11-7010-256-12&P for the M1068 version, TM 11-7010-258-12&P for the STCP version, and TM 11-7010-260-12&P for the RWS version.)	—	—
a. Performed on-line diagnostics procedures.		
b. Performed off-line diagnostics procedures.		
c. Consulted symptom index.		
d. Referred to the troubleshooting flowchart.		
3. Corrected the LRU within unit level authorization.	—	—
a. Tested the LRU.		

Performance Measures

GO **NO GO**

- b. Repaired the LRU.
 - c. Replaced unserviceable parts.
 - d. Performed an operational test.
 - e. Requisitioned unserviceable parts not on hand.
- 4. Corrected the LRU outside unit level authorization.
 - a. Documented actions taken.
 - b. Returned DA Form 5988-E and obtained DA Form 5990-E from the ULLS clerk.
 - c. Evacuated the defective LRU outside of the maintenance allocation authorization to a higher maintenance level.

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

TM 11-7010-256-12&P
 TM 11-7010-258-12&P
 TM 11-7010-260-12&P

Related

DA PAM 738-750
 DTM 11-7025-308-12&P
 TM 11-5820-401-20-1
 TM 11-5820-401-20-2
 TM 11-5820-890-20-1
 TM 11-6030-210-12
 TM 11-6130-476-12&P
 TM 11-6625-3052-14
 TM 11-6625-3199-14
 TM 11-7021-213-12&P
 TM 11-7025-280-12&P
 TM 11-7025-281-12&P
 TM 11-7025-283-12&P

Perform Scheduled Unit Level Maintenance (ULM) on Common Hardware/Software (CHS) Within a Standardized Integrated Command Post System (SICPS)

113-580-3070

Conditions: Given an SICPS with CHS, digital multimeter AN/PSM-45(*), tool kit TK-101/G, TM 11-7010-256-12&P for the tracked command post (M1068) version or TM 11-7010-258-12&P for the STCP version or TM 11-7010-260-12&P for the RWS version, and DA Form 5986-E.

Standards: Corrected all deficiencies IAW TM 11-7010-256-12&P or TM 11-7010-258-12&P or TM 11-7010-260-12&P and properly documented all shortcomings.

Performance Measures

GO NO GO

NOTE: Refer to TM 11-7010-256-12&P for the M1068 version, TM 11-7010-258-12&P for the STCP version, and TM 11-7010-260-12&P for the RWS version for performance measures 2 and 3.

- | | | |
|--|-------|-------|
| 1. Reviewed DA Form 5986-E. | _____ | _____ |
| a. Identified service to be performed. | | |
| b. Collected parts to be installed. | | |
| 2. Verified operator's performance of the preventive maintenance checks and services (PMCS). | _____ | _____ |
| 3. Performed ULM checks and services. | _____ | _____ |
| a. Verified serviceability. | | |
| b. Corrected items that did not meet technical manual criteria within the maintenance allocation authorization. | | |
| (1) Tested the LRU. | | |
| (2) Repaired the LRU. | | |
| (3) Replaced unserviceable part(s). | | |
| (4) Requisitioned unserviceable parts not on the unit's prescribed load list (PLL). | | |
| (5) Evacuated the defective LRU outside of the maintenance allocation authorization to a higher maintenance level. | | |
| c. Performed an operational test on the serviceable LRU. | | |
| d. Documented actions taken. | | |
| 4. Returned DA Form 5986-E to the ULLS clerk. | _____ | _____ |

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

TM 11-7010-256-12&P
TM 11-7010-258-12&P
TM 11-7010-260-12&P

Related

DA PAM 738-750
DTM 11-7025-308-12&P
TM 11-5820-401-20-1
TM 11-5820-401-20-2
TM 11-5820-890-20-1
TM 11-5820-890-20-2
TM 11-5895-1546-12&P
TM 11-6030-210-12
TM 11-6130-476-12&P
TM 11-6625-3052-14

**References
Required**

Related

TM 11-6625-3199-14
TM 11-7021-213-12&P
TM 11-7025-280-12&P
TM 11-7025-281-12&P
TM 11-7025-283-12&P

Install a Tactical Local Area Network (LAN)**113-580-1035**

Conditions: Given a network capable personal computer (PC) compatible or equivalent with manuals, appropriate software with user's manuals, cable connectors, hubs, unit's signal operations instructions (SOI)/standing operating procedures (/SOP), and a site map.

Standards: The tactical LAN sent and received a test message.

Performance Steps

1. Review a site map.
 - a. Identify network type.
 - b. Identify assigned Internet protocol (IP) addressing.
 - c. Identify required resources.
2. Inventory resources.
3. Connect hardware/peripherals to the network.
 - a. Place stipulated equipment IAW the site map.
 - b. Connect all hardware/peripherals IAW the site map.
4. Initialize PC systems.
 - a. Power up hardware.
 - b. Verify functionality of PC systems.
 - c. Ensure that appropriate OS and network software are installed.
5. Configure network software.
 - a. Assign IP address to each system as appropriate.
 - b. Set up user profiles IAW the unit's SOI/SOP.
 - c. Test connectivity (that is ping).
6. Perform an operational check.
 - a. Send a test message to all addressees.
 - b. Receive an acknowledgement from all addressees.

Evaluation Preparation: Ensure adequate resources are available and a site map and the unit's SOI are provided.

Performance Measures

	<u>GO</u>	<u>NO GO</u>
1. Reviewed the site map.	—	—
a. Identified network type.		
b. Identified assigned IP addressing.		
c. Identified required resources.		
2. Inventoried resources.	—	—
3. Connected hardware/peripherals to the network.	—	—
a. Placed stipulated equipment IAW the site map.		
b. Connected all hardware/peripherals IAW the site map.		
4. Initialized PC systems.	—	—
a. Powered up hardware.		
b. Verified functionality of PC systems.		
c. Ensured that appropriate OS and network software were installed.		
5. Configured network software.	—	—

Performance Measures

GO **NO GO**

- a. Assigned IP address to each system as appropriate.
- b. Set up user profiles IAW the unit's SOI/SOP.
- c. Tested connectivity (that is ping).

6. Performed an operational check.

- a. Sent a test message to all addressees.
- b. Received an acknowledgement from all addressees.

NOTE: If the operational check failed, refer to tasks 113-580-0051, 113-580-0052, 113-580-0053, and 113-580-0055 in this manual as applicable.

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

MFG MANUALS

SUM

UNIT SOI

UNIT SOP

Related

Troubleshoot a Tactical Local Area Network (LAN)
113-580-0053

Conditions: Given a properly configured LAN unable to process data, cable splicing kit, LAN circuit diagram, and a test message.

Standards: Sent a test message to and received acknowledgement from all addressees within the network.

Performance Steps

1. Verify reported malfunction.
 - a. Review operator's actions.
 - b. Perform visual inspections.
2. Isolate malfunctions.
 - a. Determine inoperable terminal.
 - b. Perform on-line diagnostics.
 - c. Perform off-line diagnostics.
3. Repair or replace the LAN cable/connectors/terminators.
4. Perform an operational check.
 - a. Send a test message to all addressees.
 - b. Receive an acknowledgement from all addressees.

NOTE: If the operational check fails, refer to the troubleshooting section of appropriate computer manual(s).

Performance Measures

	<u>GO</u>	<u>NO GO</u>
1. Verified reported malfunction. <ol style="list-style-type: none">a. Reviewed operator's actions.b. Performed visual inspection.	—	—
2. Isolated malfunctions. <ol style="list-style-type: none">a. Determined inoperable terminal.b. Performed on-line diagnostics.c. Performed off-line diagnostics.	—	—
3. Repaired or replaced the LAN cable/connectors/terminators.	—	—
4. Performed an operational check. <ol style="list-style-type: none">a. Sent a test message to all addressees.b. Received an acknowledgement from all addressees.	—	—

NOTE: If the operational check failed, refer to the troubleshooting section of appropriate computer manual(s).

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

Related

BFACS SUM
CUM
FM 24-7

**References
Required**

Related
TM 11-5895-1348-13&P
TM 11-5895-1546-12&P

Subject Area 4: Very High Frequency Radios

Install Secure AN/GRC-160 Radio Sets With or Without the AN/VIC-1
113-587-1065

Conditions: Given a designated vehicle, radio set AN/GRC-160 with or without intercommunications set AN/VIC-1; installation kit MK-1842, MK-1843, MK-1850, MK-1851, MK-1852, MK-1968, MK-1998, or MK-2066; security equipment TSEC/KY-57, fill device TSEC/KYK-13 with fill or the automated net control device (ANCD) AN/CYZ-10 with fill, fill cable, digital multimeter AN/PSM-45(*), tool kit TK-101/G, drill and drill bits from auto common No. 1; SB 11-131-1; TM 11-5820-498-12; (O)TM 11-5810-312-12-1, (O)TM 11-5810-312-12-2, (O)TM 11-5810-312-12-3, or (O)TM 11-5810-312-12-4; TM 11-5830-340-12; DA Form 5986-E, and DA Form 5988-E.

Standards: Mounted the radio set on its platform and processed a test message without error.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Inventoried complete radio system kit. (Refer to TM 11-5820-498-12 and SB 11-131-1.)	—	—
2. Installed installation kit. (Refer to TM 11-5830-340-12, TM 11-5820-498-12, and (O)TM 11-5810-312-12-4.)	—	—
3. Mounted system components. (Refer to (O)TM 11-5810-312-12-1, (O)TM 11-5810-312-12-2, (O)TM 11-5810-312-12-3, and TM 11-5820-498-12.)	—	—
4. Performed an operational check. (Passed test traffic.) (Refer to TM 11-5820-498-12.)	—	—
5. Established maintenance records.	—	—

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

(O)TM 11-5810-312-12-1
(O)TM 11-5810-312-12-2
(O)TM 11-5810-312-12-3
(O)TM 11-5810-312-12-4
SB 11-131-1
TM 11-5820-498-12
TM 11-5830-340-12

Related

DA PAM 738-750
TM 11-5820-667-12
TM 11-6625-3052-14
TM 11-6625-3199-14

Troubleshoot Secure AN/GRC-160 Radio Sets With or Without the AN/VIC-1
113-587-0068

Conditions: Given an inoperable secure AN/GRC-160 radio set with or without intercommunications set AN/VIC-1 operating in a net, digital multimeter AN/PSM-45(*), radio test set AN/PRM-34, tool kit TK-101/G, security equipment TSEC/KY-57, fill device TSEC/KYK-13 with fill or the ANCD AN/CYZ-10 with fill, fill cable, TM 11-5820-498-12, TM 11-5830-340-12, DA Form 5986-E, and DA Form 5988-E with one or more faults listed.

Standards: The radio passed operational traffic; or evacuated the defective LRU to a higher maintenance level.

Performance Measures**GO** **NO GO**

NOTE: Refer to TM 11-5820-498-12 and TM 11-5830-340-12 for all performance measures.

- | | | |
|---|-------|-------|
| 1. Verified reported malfunctions. | _____ | _____ |
| a. Reviewed operator's actions. | | |
| b. Performed visual inspection. | | |
| 2. Performed systematic troubleshooting procedures. | _____ | _____ |
| a. Sectionalized system. (Determined inoperable station.) | | |
| b. Localized inoperable station. (Measured input/output between stations on-line.) | | |
| c. Isolated the defect to the LRU. | | |
| (1) Performed off-line measurements. | | |
| (2) Verified the defective LRU. | | |
| 3. Took corrective actions. | _____ | _____ |
| a. Fixed or replaced the defective LRU. (Refer to the MAC.) | | |
| b. Performed an operational check. | | |
| c. Evacuated the LRU with uncorrectable deficiencies to a higher maintenance level. | | |
| (1) Processed for a higher maintenance level. | | |
| (2) Prepared maintenance forms. | | |

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References**Required**

TM 11-5820-498-12
 TM 11-5830-340-12

Related

(O)TM 11-5810-312-12-1
 (O)TM 11-5810-312-12-2
 (O)TM 11-5810-312-12-3
 (O)TM 11-5810-394-14&P
 DA PAM 738-750
 TM 11-5820-667-12
 TM 11-6625-3015-14
 TM 11-6625-3052-14
 TM 11-6625-3199-14

Perform Scheduled Unit Level Maintenance (ULM) on Secure AN/GRC-160 Radio Sets With or Without the AN/VIC-1
113-587-3111

Conditions: Given a secure radio set AN/GRC-160 with or without intercommunications set AN/VIC-1; tool kit TK-101/G; security equipment TSEC/KY-57, TSEC/KYK-13, or ANCD AN/CYZ-10; fill cable; TM 11-5820-498-12, TM 11-5830-340-12, (O)TM 11-5810-256-12, TM 11-5820-401-20-1, and TM 11-5820-401-20-2; DA Form 5986-E, and DA Form 5988-E.

Standards: Documented all shortcomings and corrected all deficiencies IAW TM 11-5820-498-12, TM 11-5830-340-12, (O)TM 11-5810-256-12, TM 11-5820-401-20-1, and TM 11-5820-401-20-2; or evacuated the equipment that had a major deficiency beyond unit maintenance level to a higher maintenance level.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Identified maintenance to be performed. (Reviewed DA Form 5986-E for scheduled maintenance.)	—	—
2. Assembled required material. (Refer to TM 11-5820-498-12, TM 11-5830-340-12, and (O)TM 11-5810-256-12.)	—	—
3. Performed ULM checks and services. (Refer to TM 11-5820-498-12, TM 11-5830-340-12, and (O)TM 11-5810-256-12.)	—	—
4. Took corrective action. (Refer to TM 11-5820-401-20-1, TM 11-5820-401-20-2, and TM 11-5830-340-12.)	—	—
a. Repaired correctable deficiencies and/or shortcomings.		
b. Evacuated the LRU with uncorrected deficiencies to a higher maintenance level.		
(1) Recorded equipment status.		
(2) Reported status to the ULLS clerk.		
c. Documented uncorrected shortcomings.		
(1) Recorded action taken.		
(2) Scheduled next maintenance.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

(O)TM 11-5810-256-12
TM 11-5820-401-20-1
TM 11-5820-401-20-2
TM 11-5820-498-12
TM 11-5830-340-12

Related

(O)TM 11-5810-394-14&P
DA PAM 738-750

Install Secure AN/VRC-12 Series Radio Sets With or Without the AN/VIC-1
113-587-1068

Conditions: Given a designated vehicle, radio set AN/VRC-12 with or without intercommunications set AN/VIC-1, security equipment TSEC/KY-57, fill device TSEC/KYK-13 with fill or the ANCD AN/CYZ-10 with fill, fill cable, digital multimeter AN/PSM-45(*), tool kit TK-101/G, drill and drill bits from auto common No. 1, SB 11-131-1, TM 11-5820-401-20-1, TM 11-5820-401-20-2, (O)TM 11-5810-256-12, (O)TM 11-5810-312-12-2, (O)TM 11-5810-312-12-3, TM 11-5830-340-12, DA Form 5986-E, and DA Form 5988-E.

Standards: Mounted the radio set on its platform and processed a test message without error.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Inventoried complete radio system kit. (Refer to TM 11-5820-401-20-1, TM 11-5820-401-20-2, and SB 11-131-1.)	—	—
2. Installed installation kit. (Refer to TM 11-5830-340-12, TM 11-5820-401-20-1, and TM 11-5820-401-20-2.)	—	—
3. Mounted system components. (Refer to (O)TM 11-5810-256-12, (O)TM 11-5810-312-12-2, (O)TM 11-5810-312-12-3, TM 11-5820-401-20-1, and TM 11-5820-401-20-2.)	—	—
4. Performed an operational check. (Passed test traffic.) (Refer to TM 11-5820-401-20-1 and TM 11-5820-401-20-2.)	—	—
5. Established maintenance records.	—	—

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

(O)TM 11-5810-256-12
(O)TM 11-5810-312-12-2
(O)TM 11-5810-312-12-3
SB 11-131-1
TM 11-5820-401-20-1
TM 11-5820-401-20-2
TM 11-5830-340-12

Related

(O)TM 11-5810-394-14&P
DA PAM 738-750
TM 11-6625-3052-14
TM 11-6625-3199-14

Troubleshoot Secure AN/VRC-12 Series Radio Sets With or Without the AN/VIC-1
113-587-0071

Conditions: Given an inoperable secure AN/VRC-12 series radio set with or without intercommunications set AN/VIC-1 operating in a net; digital multimeter AN/PSM-45(*); radio test set AN/PRM-34; tool kit TK-101/G; security equipment TSEC/KY-57, TSEC/KYK-13, or the ANCD AN/CYZ-10 with fill; fill cable; DA Form 5988-E with one or more faults listed; TM 11-5820-401-20-1, TM 11-5820-401-20-2, and (O)TM 11-5810-256-12.

Standards: Restored the radio set to operation or evacuated the defective LRU to a higher maintenance level.

Performance Measures	<u>GO</u>	<u>NO GO</u>
NOTE: Refer to TM 11-5820-401-20-1, TM 11-5820-401-20-2, and (O)TM 11-5810-256-12 for all performance measures.		
1. Verified reported malfunctions.	_____	_____
a. Reviewed operator's actions.		
b. Performed visual inspection.		
2. Performed systematic troubleshooting procedures.	_____	_____
a. Sectionalized system. (Determined inoperable station.)		
b. Localized inoperable station. (Performed on-line diagnostics.)		
c. Isolated the defect to the LRU.		
(1) Performed off-line measurements.		
(2) Verified the defective LRU.		
3. Took corrective actions.	_____	_____
a. Fixed or replaced the defective LRU. (Refer to the MAC.)		
b. Performed an operational check.		
c. Evacuated the LRU with uncorrectable deficiencies to a higher maintenance level.		
(1) Processed for a higher maintenance level.		
(2) Prepared maintenance forms.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

(O)TM 11-5810-256-12
TM 11-5820-401-20-1
TM 11-5820-401-20-2

Related

DA PAM 738-750
FM 11-32
TM 11-5830-340-12
TM 11-6625-3015-14
TM 11-6625-3052-14
TM 11-6625-3199-14

Perform Scheduled Unit Level Maintenance (ULM) on Secure AN/VRC-12 Series Radio Sets With or Without the AN/VIC-1

113-587-3114

Conditions: Given a secure AN/VRC-12 radio set with or without intercommunications set AN/VIC-1, radio test set AN/PRM-34, tool kit TK-101/G, TSEC/KYK-13 with fill or ANCD AN/CYZ-10 with fill, fill cable, TM 11-5820-401-20-1, TM 11-5820-401-20-2, (O)TM 11-5810-256-12, TM 11-5830-340-12, DA Form 5986-E, and DA Form 5988-E.

Standards: Documented all shortcomings and corrected all deficiencies; or evacuated the equipment that had a major deficiency beyond unit maintenance level to a higher maintenance level.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Identified maintenance to be performed. (Reviewed DA Form 5986-E for scheduled maintenance.)	—	—
2. Assembled required material. (Refer to TM 11-5820-401-20-1, TM 11-5820-401-20-2, and (O)TM 11-5810-256-12.)	—	—
3. Performed ULM checks and services. (Refer to TM 11-5820-401-20-1, TM 11-5820-401-20-2, and TM 11-5830-340-12.)	—	—
4. Took corrective actions. (Refer to TM 11-5820-401-20-1, TM 11-5820-401-20-2, and TM 11-5830-340-12.)	—	—
a. Repaired correctable deficiencies and/or shortcomings.		
b. Evacuated the LRU with uncorrected deficiencies to a higher maintenance level.		
(1) Recorded equipment status.		
(2) Reported status to the ULLS clerk.		
c. Documented uncorrected shortcomings.		
(1) Recorded actions taken.		
(2) Scheduled next maintenance.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

(O)TM 11-5810-256-12
 TM 11-5820-401-20-1
 TM 11-5820-401-20-2
 TM 11-5830-340-12

Related

DA PAM 738-750
 TM 11-6625-3015-14
 TM 11-6625-3052-14
 TM 11-6625-3199-14

Install Single-Channel Ground and Airborne Radio Systems (SINGARSs) ICOM With or Without the AN/VIC-1 or AN/VIC-3
113-587-1067

Conditions: Given a designated vehicle, designated SINGARS integrated communications (ICOM) with or without intercommunications set AN/VIC-1; installation kit(s) MK-2310 and MK-2314 (if radio set AN/VRC-92 is installed); ANCD AN/CYZ-10 with fill, fill cable; digital multimeter AN/PSM-45(*); tool kit TK-101/G; drill and drill bits from auto common No. 1; TM 11-5820-890-10-1, TM 11-5820-890-20-1, TM 11-5820-890-20-2, and TM 11-5830-340-12; SB 11-131-2; DA Form 5986-E, and DA Form 5988-E.

Standards: Mounted the radio set on its platform and processed test traffic without error.

Performance Steps

1. Inventory complete radio system kit. (Refer to SB 11-131-2, TM 11-5820-890-10-1, TM 11-5820-890-20-1, and TM 11-5820-890-20-2.)
2. Install installation kit. (Refer to TM 11-5820-890-20-1, TM 11-5820-890-20-2, and TM 11-5830-340-12.)
3. Mount system components. (Refer to TM 11-5820-890-20-1 and TM 11-5820-890-20-2.)
4. Perform an operational check. (Pass test traffic.) (Refer to TM 11-5820-890-10-1.)
5. Establish maintenance records.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Inventoried complete radio system kit. (Refer to SB 11-131-2, TM 11-5820-890-10-1, TM 11-5820-890-20-1, and TM 11-5820-890-20-2.)	—	—
2. Installed installation kit. (Refer to TM 11-5820-890-20-1, TM 11-5820-890-20-2, and TM 11-5830-340-12.)	—	—
3. Mounted system components. (Refer to TM 11-5820-890-20-1 and TM 11-5820-890-20-2.)	—	—
4. Performed an operational check. (Passed test traffic.) (Refer to TM 11-5820-890-10-1.)	—	—
5. Established maintenance records.	—	—

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

SB 11-131-2
TM 11-5820-890-10-1
TM 11-5820-890-20-1
TM 11-5820-890-20-2
TM 11-5830-340-12

Related

(O)TM 11-5810-394-14&P
DA PAM 738-750
TM 11-6625-3052-14
TM 11-6625-3199-14

**Troubleshoot Secure Single-Channel Ground and Airborne Radio Systems (SINGARSs) ICOM
With or Without the AN/VIC-1 or AN/VIC-3
113-587-0070**

Conditions: Given an inoperable secure SINGARS with or without intercommunications set AN/VIC-1, with or without frequency-hopping multiplexer (FHMUX) TD-1456/VRC, operating in a net; digital multimeter AN/PSM-45(*); radio test set AN/PRM-34; tool kit TK-101/G; ANCD AN/CYZ-10 with fill, fill cable; TM 11-5820-890-20-1, TM 11-5820-890-20-2, or TM 11-5820-890-20-3; DA Form 5986-E, and DA Form 5988-E.

Standards: Restored the radio set to operation or evacuated the defective LRU to a higher maintenance level.

Performance Steps

1. Verify reported malfunctions.
 - a. Review operator's actions.
 - b. Perform visual inspections.
2. Perform systematic troubleshooting procedures.
 - a. Perform self-test.
 - b. Perform off-line measurements.
3. Take corrective actions.
 - a. Fix or replace the defective LRU. (Refer to the MAC.)
 - b. Perform an operational check.
 - c. Evacuate the defective LRU to a higher maintenance level.
 - (1) Process for a higher maintenance level.
 - (2) Prepare maintenance forms.

Performance Measures

NOTE: Refer to TM 11-5820-890-20-1, TM 11-5820-890-20-2, or TM 11-5820-890-20-3 for all performance measures.

	<u>GO</u>	<u>NO GO</u>
1. Verified reported malfunctions.	_____	_____
a. Reviewed operator's actions.		
b. Performed visual inspection.		
2. Performed systematic troubleshooting procedures.	_____	_____
a. Performed self-test.		
b. Performed off-line measurements.		
3. Took corrective actions.	_____	_____
a. Fixed or replaced the defective LRU. (Refer to the MAC.)		
b. Performed an operational check.		
c. Evacuated the defective LRU to a higher maintenance level.		
(1) Processed for a higher maintenance level.		
(2) Prepared maintenance forms.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

TM 11-5820-890-20-1
TM 11-5820-890-20-2
TM 11-5820-890-20-3

Related

(O)TM 11-5810-394-14&P
DA PAM 738-750
FM 11-32
TM 11-6615-3052-14
TM 11-6625-3015-14
TM 11-6625-3199-14

Program Radio Set AN/PRC-127**113-587-2084**

Conditions: Given radio set AN/PRC-127, TM 11-5820-1048-10, TM 11-5820-1048-24&P, FM 24-19, unit's SOI, unit's letter of instruction (LOI), and DA Form 2404 or DA Form 5988-E.

Standards: Loaded the frequencies identified in the unit's SOI or LOI IAW TM 11-5820-1048-24&P and completed a good communications check IAW the procedures outlined in FM 24-19.

Performance Measures**GO** **NO GO**

NOTE: Refer to TM 11-5820-1048-10 and TM 11-5820-1048-24&P for all performance measures.

- | | | |
|--|-------|-------|
| 1. Identified frequencies to be loaded. (Reviewed the unit's SOI or LOI for the proper frequencies to load.) | _____ | _____ |
| 2. Reviewed operator's PMCS (DA Form 2404 or DA Form 5988-E). | _____ | _____ |
| 3. Loaded the frequencies. (Refer to TM 11-5820-1048-24&P.) | _____ | _____ |
| 4. Verified the frequencies loaded in the proper channel. (Refer to the unit's LOI.) | _____ | _____ |
| 5. Conducted a communications check. (Refer to the procedures outlined in FM 24-19.) | _____ | _____ |

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References**Required**

FM 24-19
 TM 11-5820-1048-10
 TM 11-5820-1048-24&P
 UNIT LOI
 UNIT SOI

Related

DA PAM 738-750

Troubleshoot Radio Set AN/PRC-127
113-587-0074

Conditions: Given an inoperable radio set AN/PRC-127, digital multimeter AN/PSM-45(*), radio test set AN/PRM-34, tool kit TK-101/G, TM 11-5820-1048-24&P, DA Form 5986-E, and DA Form 5988-E with one or more faults listed.

Standards: The radio set passed operational traffic; or evacuated the defective LRU to a higher maintenance level.

Performance Measures	<u>GO</u>	<u>NO GO</u>
NOTE: Refer to TM 11-5820-1048-24&P for all performance measures.		
1. Verified reported malfunctions.	_____	_____
a. Reviewed operator's actions.		
b. Performed visual inspection.		
2. Performed systematic troubleshooting procedures.	_____	_____
a. Sectionalized system. (Determined inoperable station.)		
b. Localized inoperable station. (Performed on-line diagnostics.)		
c. Isolated the defect to the LRU.		
(1) Performed off-line measurements.		
(2) Verified the defective LRU.		
3. Took corrective actions.	_____	_____
a. Fixed or replaced the defective LRU. (Refer to the MAC.)		
b. Performed an operational check. (Passed test message traffic.)		
c. Evacuated the defective LRU to a higher maintenance level.		
(1) Processed for a higher maintenance level.		
(2) Prepared maintenance forms.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References	Related
Required	DA PAM 738-750
TM 11-5820-1048-24&P	FM 11-32
	TM 11-6625-3015-14
	TM 11-6625-3052-14
	TM 11-6625-3199-14

Perform Unit Level Maintenance (ULM) on Radio Set AN/PRC-127
113-587-3117

Conditions: Given radio set AN/PRC-127, TM 11-5820-1048-10, TM 11-5820-1048-24&P, DA Form 5986-E, and DA Form 5988-E.

Standards: Documented all shortcomings and corrected all deficiencies IAW TM 11-5820-1048-10 and TM 11-5820-1048-24&P; or evacuated the equipment that had a major deficiency beyond unit maintenance level to a higher maintenance level.

Performance Measures

GO **NO GO**

NOTE: Refer to TM 11-5820-1048-10 and TM 11-5820-1048-24&P for performance measures 2 through 4.

- | | | |
|---|-------|-------|
| 1. Identified maintenance to be performed. (Reviewed DA Form 5986-E for scheduled maintenance.) | _____ | _____ |
| 2. Assembled required material. | _____ | _____ |
| 3. Performed ULM checks and services. | _____ | _____ |
| 4. Took corrective actions. | _____ | _____ |
| a. Repaired correctable deficiencies and/or shortcomings. | | |
| b. Evacuated the LRU with uncorrected deficiencies to a higher maintenance level. | | |
| (1) Recorded equipment status. | | |
| (2) Reported status to the ULLS clerk. | | |
| c. Documented uncorrected shortcomings. | | |
| (1) Recorded actions taken. | | |
| (2) Scheduled next maintenance. | | |

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References**Required**

TM 11-5820-1048-10
 TM 11-5820-1048-24&P

Related

DA PAM 738-750

Install Multiplexer TD-1456/VRC
113-587-1071

Conditions: Given a designated vehicle with two AN/VRC-92 radio sets with an AM-7239C/VRC vehicular amplifier adapter (VAA) with dual-snap outputs, multiplexer TD-1456/VRC, installation kit MK-2314, multiplexer mounting base MT-6845, radio test set AN/PRM-34, the ANCD AN/CYZ-10 with fill, fill cable, digital multimeter AN/PSM-45(*), tool kit TK-101/G, drill and drill bits from auto common No. 1, TM 11-5820-890-10-1, TM 11-5820-890-20-1, DA Form 5986-E, and DA Form 5988-E.

Standards: Mounted installation kits on their platform; the multiplexer passed the DC power-on built-in test (BIT), the off-line BIT, and the transmit/receive on-line BIT; and the multiplexer passed two-way test traffic over all ports.

Performance Measures	GO	NO GO
1. Inventoried complete radio system kit. (Refer to TM 11-5820-890-20-1 and packing list overpacked with equipment.)	_____	_____
2. Installed installation kit. (Refer to TM 11-5820-890-20-1.)	_____	_____
3. Mounted system components. (Refer to TM 11-5820-890-20-1.)	_____	_____
4. Performed an operational check. (Refer to TM 11-5820-890-20-1 and TM 11-5820-890-10-1.) a. Performed power-on BIT. b. Performed off-line BIT. c. Performed transmit/receive BIT. d. Passed two-way test traffic through all ports.	_____	_____
5. Established maintenance records.	_____	_____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

TM 11-5820-890-10-1
TM 11-5820-890-20-1

Related

(O)TM 11-5810-394-14&P
DA PAM 738-750
TM 11-5820-890-10-6
TM 11-5820-890-10-8
TM 11-5820-890-20-2
TM 11-6625-3015-14
TM 11-6625-3052-14
TM 11-6625-3199-14

Subject Area 5: Retransmission Stations (RETRANS)

Operate Secure AN/VRC-49 RETRANS**113-587-2081**

Conditions: Given a test message, an operational AN/VRC-49 secure RETRANS system with ground plane antenna systems, ANCD AN/CYZ-10 with fill, fill cable, operating net, TSEC/KY-57, primary and alternate RETRANS site locations, TM 11-5820-401-10-1, (O)TM 11-5810-256-OP-5, and TM 11-5985-357-13.

Standards: Radio station A sent and received a test message to and from radio station B.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Performed operator's PMCS. (Refer to TM 11-5820-401-10-1 and (O)TM 11-5820-256-OP-5, operator's PMCS tables.)	—	—
a. Completed maintenance form.		
b. Prepared radios for operation.		
(1) Loaded variables into the TSEC/KY-57s.		
(2) Acquired frequencies.		
(3) Preset radio frequencies.		
(4) Acquired call signs/call words from the AN/CYZ-10.		
(5) Entered net using correct call signs/call words.		
2. Set up secure RETRANS site. (Refer to TM 11-5820-401-10-1, (O)TM 11-5810-256-OP-5, and TM 11-5985-357-13.)	—	—
a. Moved to RETRANS site.		
b. Made initial contact on vehicular antennas.		
c. Performed operator's PMCS on ground plane antenna systems.		
d. Set up ground plane antenna systems.		
3. Monitored secure RETRANS. (Refer to TM 11-5820-401-10-1, (O)TM 11-5810-256-OP-5, and TM 11-5985-357-13.)	—	—
a. Placed the C-2299/VRC RETRANS switch to ON.		
b. Requested station A send a test message to station B. Upon successful completion, requested station B send a test message to station A.		
(1) Monitored RETRANS for correct operation.		
(2) Manually retransmitted traffic if RETRANS failed.		
c. Informed net that RETRANS was operational.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References**Required**

(O)TM 11-5810-256-OP-5
 TM 11-5820-401-10-1
 TM 11-5985-357-13

Related

(O)TM 11-5810-394-14&P
 DA PAM 738-750
 FM 11-32
 FM 21-26
 TM 11-5820-890-10-6

Operate Secure AN/VRC-92 RETRANS

113-587-2082

Conditions: Given a test message, an operational AN/VRC-92 secure RETRANS system with ground plane antenna systems, fill device MX-18290 with FH data or ANCD AN/CYZ-10 with fill, fill cable, operating net, primary and alternate RETRANS site locations, TM 11-5820-890-10-1, and TM 11-5985-357-13.

Standards: Radio station A sent and received test messages to and from radio station B and processed CUE calls as required.

Performance Steps

1. Perform operator's PMCS. (Refer to TM 11-5820-890-10-1, operator's PMCS tables.)
2. Complete maintenance form.
3. Prepare radio for operation.
 - a. Perform premission checks.
 - b. Acquire frequencies and call signs/call words from the AN/CYZ-10.
 - c. Load single-channel frequencies.
 - d. Load offset frequencies.
 - e. Load communications security (COMSEC).
 - f. Load frequency-hopping (FH) data.
 - g. Enter the net using cold start, hot start, or cold start late net entry.
 - h. Perform net control station (NCS) operations.
4. Set up secure RETRANS site. (Refer to TM 11-5820-890-10-1 and TM 11-5985-357-13, operator's PMCS tables.)
 - a. Move to RETRANS site.
 - b. Make initial contact with the net.
 - c. Perform operator's PMCS on the ground plane antennas.
 - d. Set up the ground plane antennas.
 - e. Set up RTs C and D for FH operation.
 - (1) Set FCTN switches to SQ ON.
 - (2) Set RT C MODE to FH and COMSEC to CT. Contact RT A with RT C.
 - (3) Set RT D MODE to FH and COMSEC to CT. Contact RT B with RT D.
 - (4) If RT A is the NCS, set RT D MODE to FH-M. If RT B is the NCS, set the RT C MODE to FH-M.

NOTE: If the outstation does not have the new FH data, the RETRANS RT will have to electronically-remote-fill (ERF) the new FH data to the outstation.

- (5) Connect the retransmit cable.

5. Monitor secure RETRANS. (Refer to TM 11-5820-890-10-1 and TM 11-5985-357-13.)
 - a. Request station A send a given test message to station B. Upon successful completion, request station B send a given test message to station A.
 - b. Set RTs C and D FCTN switches to RXMT.
 - c. Inform that RETRANS is operational.
 - d. Monitor RETRANS for correct operation.

NOTE: No voice or data traffic will be audible. The only indication that traffic is being passed is by observation of the meters.

- e. Respond to CUE calls as required.
 - (1) Late net entries.
 - (2) Relay FH updates.

Performance Measures**GO** **NO GO**

1. Performed operator's PMCS. (Refer to TM 11-5820-890-10-1, operator's PMCS tables.)
 - a. Completed maintenance form.
 - b. Prepared radios for operation.
 - (1) Performed premission checks.
 - (2) Acquired frequencies and call signs/call words from the AN/CYZ-10.
 - (3) Loaded single-channel frequencies.
 - (4) Loaded offset frequencies.
 - (5) Loaded COMSEC.
 - (6) Loaded FH data.
 - (7) Entered net using cold start, hot start, or cold start late net entry.
 - (8) Performed NCS operations.

— —

2. Set up secure RETRANS site. (Refer to TM 11-5820-890-10-1 and TM 11-5985-357-13, operator's PMCS tables.)
 - a. Moved to RETRANS site.
 - b. Made initial contact with the net.
 - c. Performed operator's PMCS on the ground plane antenna systems.
 - d. Set up the ground plane antennas.
 - e. Set up RTs C and D for FH operation.
 - (1) Set FCTN switches to SQ ON.
 - (2) Set RT C MODE to FH and COMSEC to CT. Contacted RT A with RT C.
 - (3) Set RT D MODE to FH and COMSEC to CT. Contacted RT B with RT D.
 - (4) If RT A was the NCS, set RT D MODE to FH-M. If RT B was the NCS, set RT C MODE to FH-M.

— —

NOTE: If the outstation does not have the new FH data, the RETRANS RT will have to ERF the new FH data to the outstation.

- (5) Connected the retransmit cable.

3. Monitored secure RETRANS. (Refer to TM 11-5820-890-10-1 and TM 11-5985-357-13.)
 - a. Requested station A send a given test message to station B. Upon successful completion, requested station B send a given test message to station A.
 - b. Set RTs C and D FCTN switches to RXMT.
 - c. Informed net that RETRANS was operational.
 - d. Monitored RETRANS for correct operation.

— —

NOTE: No voice or data traffic will be audible. The only indication that traffic is being passed is by observation of the meters.

- e. Responded to CUE calls as required.
 - (1) Late net entries.
 - (2) Relay FH updates.

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References**Required**

TM 11-5820-890-10-1
TM 11-5985-357-13

Related

(O)TM 11-5810-394-14&P
DA PAM 738-750
FM 11-32

**References
Required**

Related
FM 21-26
TM 11-5820-890-10-6

**Operate Secure Tactical Satellite (TACSAT) RETRANS Using the AN/PSC-7
113-587-2083**

Conditions: Given a test message, an operational secure TACSAT RETRANS, RETRANS adapter cable, satellite time, fill cable, adaptor cable CX-13311, ANCD AN/CYZ-10 with fill, operating net with station A and station B designated, TM 11-5820-890-10-1, and the Cincinnati Electronics Corporation Operation and Maintenance Manual (CECOMM) for the AN/PSC-7 miniaturized ultra high frequency (UHF) satellite transceiver.

NOTE: Referenced manufacturer's operation and maintenance manual is for the TACSAT AN/PSC-7 and does not have a technical manual number.

Standards: Radio station A sent and received test messages to and from radio station B through the RETRANS.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Performed operator's PMCS. (Refer to PMCS Table 5-1 in Chapter 5 of the CECOMM for the AN/PSC-7 miniaturized UHF satellite transceiver.) <ul style="list-style-type: none"> a. Completed maintenance worksheet. b. Prepared SINCGARS for operation. <ul style="list-style-type: none"> (1) Performed premission checks. (2) Acquired frequencies and call signs/call words from the AN/CYZ-10. (3) Set up the ground plane antenna. (4) Loaded single-channel frequencies. (5) Loaded COMSEC. (6) Loaded FH data. (7) Entered net using cold start, hot start, or cold start late net entry. (8) Performed NCS operations. c. Prepared TACSAT for operation. <ul style="list-style-type: none"> (1) Performed preset and offset procedures. (2) Set up medium gain antenna. (3) Selected mode. (4) Loaded COMSEC. 	—	—
<p>WARNING: Electromagnetic Radiation: Do not stand in the direct path of the medium gain antenna when transmitting. Do not work on cables when power is on. Transmit cables conduct radio frequency energy that can cause fatal burns and electrical shock. Ensure the POWER IS OFF before working on the antenna connector. If you feel the slightest warming effect while near this equipment, MOVE AWAY QUICKLY!</p>		
2. Set up secure RETRANS site. (Refer to TM 11-5820-890-10-1 and the CECOMM for the AN/PSC-7 miniaturized UHF satellite transceiver.) <ul style="list-style-type: none"> a. Connected adapter cable CX-3311 between the TACSAT and SINCGARS. Placed SINCGARS FCTN switch to RXMT. b. Made initial contact with TACSAT. 	—	—
3. Monitored secure RETRANS. (Refer to TM 11-5820-890-10-1 and the CECOMM for the AN/PSC-7 miniaturized UHF satellite transceiver.) <ul style="list-style-type: none"> a. Requested station A send a test message to station B. Upon successful completion, requested station B send a test message to station A. b. Informed net that TACSAT RETRANS was operational. c. Monitored RETRANS for correct operation. (Passed two-way traffic between radios.) d. Manually retransmitted traffic if RETRANS failed. 	—	—

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References**Required**

CECOMM

TM 11-5820-890-10-1

Related

(O)TM 11-5810-394-14&P

DA PAM 738-750

FM 11-32

FM 21-26

TM 11-5820-890-10-6

Operate Secure Tactical Satellite (TACSAT) RETRANS Using the AN/PSC-5
113-587-2085

Conditions: Given a test message, two operational TACSAT terminals (AN/PSC-5), radio set AN/VRC-90, RETRANS adapter cable (W4), RETRANS adapter cable (W5), satellite time, fill cable, ANCD AN/CYZ-10 with fill, an operating net with station A and station B designated, TM 11-5820-1130-12&P, and TM 11-5820-890-10-8.

Standards: Radio station A sent and received test messages to and from radio station B through the RETRANS.

Performance Measures

GO **NO GO**

- | | |
|---|----------|
| 1. Performed operator's PMCS. (Refer to PMCS Table 5-1 in Chapter 5 of the operator's and maintenance manual for radio set AN/PSC-5.) <ul style="list-style-type: none"> a. Completed maintenance worksheet. b. Prepared TACSAT for operation. <ul style="list-style-type: none"> (1) Performed terminal BIT. (2) Loaded satellite communications (SATCOM) presets. (3) Selected mode (PT). (4) Set up the medium gain antenna. c. Prepared SINCGARS for operation. <ul style="list-style-type: none"> (1) Performed premission checks. (2) Acquired frequencies and call signs/call words from the AN/CYZ-10. (3) Set up the ground plane antenna. (4) Loaded single-channel frequencies. (5) Loaded COMSEC. (6) Loaded FH data. (7) Entered the net using hot start or cold start late net entry. | — — |
|---|----------|

WARNING: Electromagnetic Radiation. Do not stand in the direct path of the medium gain antenna when transmitting. Do not work on cables when power is on. Transmit cables conduct radio frequency energy that can cause fatal burns and electrical shock. Ensure the POWER IS OFF before working on the antenna connector. If you feel the slightest warming effect while near this equipment, MOVE AWAY QUICKLY!

- | | |
|--|----------|
| 2. Set up secure TACSAT RETRANS site. (Refer to TM 11-5820-1130-12&P.) <ul style="list-style-type: none"> a. Connected adapter cable (W4) between TACSAT terminals. Placed MODE switch to PT. b. Performed a SATCOM LOOPBACK. c. Made initial contact with distant stations. | — — |
| 3. Set up secure MIXED (VHF/SATCOM) RETRANS site. (Refer to TM 11-5820-1130-12&P.) <ul style="list-style-type: none"> a. Connected adapter cable (W5) between the TACSAT and SINCGARS. Placed SINCGARS FCTN switch to RXMT. b. Made initial contact with TACSAT. | — — |
| 4. Monitored secure RETRANS. (Refer to TM 11-5820-1130-12&P.) <ul style="list-style-type: none"> a. Requested station A send a test message to station B. b. Upon successful completion, requested station B send a test message to station A. c. Informed the net that TACSAT RETRANS was operational. d. Monitored RETRANS for correct operation. (Passed two-way traffic between radios.) e. Manually retransmitted traffic if RETRANS failed. | — — |

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References**Required**

TM 11-5820-1130-12&P

TM 11-5820-890-10-8

Related

DA PAM 738-750

FM 11-32

FM 21-26

TM 11-5820-890-10-6

Subject Area 6: Tactical Satellite Equipment

**Install Secure AN/VSC-7 or a Similar TACSATCOM Radio Set
113-589-1009**

Conditions: Given a designated vehicle, radio set AN/VSC-7; security equipment TSEC/KY-57, KY-99, and ANCD AN/CYZ-10 with fill, fill cable; tool kit TK-101/G, drill and drill bits from auto common No. 1, TM 11-5895-1181-10, TM 11-5895-1181-20, and (O)TM 11-5810-312-12-2.

Standards: Installed the secure radio set AN/VSC-7 and transmitted/received a test message without error.

Performance Steps

NOTE: Refer to TM 11-5895-1181-10, TM 11-5895-1181-20, and (O)TM 11-5810-312-12-2 for performance measures 1 through 4 unless otherwise indicated.

1. Inventory installation kit and accessories.
2. Install installation kit.
3. Perform an operational check. (Transmit and receive a test message.) (Refer to TM 11-5895-1181-10.)
4. Mount system components.
5. Establish maintenance records. (Refer to the ULLS clerk.)

Performance Measures

NOTE: Refer to TM 11-5895-1181-10, TM 11-5895-1181-20, and (O)TM 11-5810-312-12-2 for performance measures 1 through 4 unless otherwise indicated.

	<u>GO</u>	<u>NO GO</u>
1. Inventoried installation kit and accessories.	_____	_____
2. Installed installation kit.	_____	_____
3. Mounted system components.	_____	_____
4. Performed an operational check. (Transmitted and received a test message.) (Refer to TM 11-5895-1181-10.)	_____	_____
5. Established maintenance records. (Refer to the ULLS clerk.)	_____	_____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

(O)TM 11-5810-312-12-2
TM 11-5895-1181-10
TM 11-5895-1181-20

Related

CECOMM
DA PAM 738-750
TM 11-5820-890-10-6

Troubleshoot Secure Tactical Satellite Communications (TACSATCOM) Radio Set AN/VSC-7 or a Similar TACSATCOM Radio Set
113-589-0043

Conditions: Given an inoperable secure TACSATCOM radio set AN/VSC-7 or a similar TACSATCOM radio set, DA Form 5988-E with one or more faults listed; security equipment TSEC/KY-57, KY-99, and ANCD AN/CYZ-10 with fill, fill cable; tool kit TK-101/G, TM 11-5895-1181-10, TM 11-5895-1181-20, and (O)TM 11-5810-312-12-2.

Standards: The TACSATCOM radio set passed operational traffic; or evacuated the defective LRU to a higher maintenance level.

Performance Steps

NOTE: Refer to TM 11-5895-1181-10, TM 11-5895-1181-20, and (O)TM 11-5810-312-2 for all performance measures.

1. Verify reported malfunctions.
 - a. Review operator's actions.
 - b. Perform visual inspections.
2. Perform systematic troubleshooting procedures.
 - a. Sectionalize system. (Determine inoperable station.)
 - b. Localize inoperable station. (Perform on-line diagnostics.)
 - c. Isolate the defect to the LRU.
 - (1) Perform off-line measurements.
 - (2) Verify the defective LRU.
3. Take corrective actions.
 - a. Fix or replace the defective LRU. (Refer to the MAC.)
 - b. Perform an operational check.
 - c. Evacuate the LRU with uncorrectable deficiencies to a higher maintenance level.
 - (1) Process for a higher maintenance level.
 - (2) Prepare maintenance records.

Performance Measures

NOTE: Refer to TM 11-5895-1181-10, TM 11-5895-1181-20, and (O)TM 11-5810-312-12-2 for all performance measures.

	<u>GO</u>	<u>NO GO</u>
1. Verified reported malfunctions. <ol style="list-style-type: none">a. Reviewed operator's actions.b. Performed visual inspection.	_____	_____
2. Performed systematic troubleshooting procedures. <ol style="list-style-type: none">a. Sectionalized system. (Determined inoperable station.)b. Localized inoperable station. (Performed on-line diagnostics.)c. Isolated the defect to the LRU.<ol style="list-style-type: none">(1) Performed off-line measurements.(2) Verified the defective LRU.	_____	_____
3. Took corrective actions. <ol style="list-style-type: none">a. Fixed or replaced the defective LRU. (Refer to the MAC.)b. Performed an operational check.c. Evacuated the LRU with uncorrectable deficiencies to a higher maintenance level.<ol style="list-style-type: none">(1) Processed for a higher maintenance level.(2) Prepared maintenance records.	_____	_____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

(O)TM 11-5810-312-12-2
TM 11-5895-1181-10
TM 11-5895-1181-20

Related

CECOMM
DA PAM 738-750
TM 11-5895-1180-20

Perform Scheduled Unit Level Maintenance (ULM) on Secure Tactical Satellite Communications (TACSATCOM) Radio Set AN/VSC-7 or a Similar TACSATCOM Radio Set
113-589-3032

Conditions: Given a secure TACSATCOM radio set AN/VSC-7 or a similar TACSATCOM radio set; security equipment TSEC/KY-57, KY-99, and ANCD AN/CYZ-10 with fill, fill cable; tool kit TK-101/G, TM 11-5895-1181-20, (O)TM 11-5810-312-12-2, and DA Form 5986-E.

Standards: Documented all shortcomings and corrected all deficiencies IAW TM 11-5895-1181-20 and (O)TM 11-5810-312-12-2; or evacuated the equipment that had a major deficiency beyond unit maintenance level to a higher maintenance level.

Performance Steps

NOTE: Refer to TM 11-5820-1181-20 and (O)TM 11-5820-5810-312-2 for performance measures 2 through 4.

1. Identify ULM required. (Review DA Form 5986-E.)
2. Assemble required resources.
3. Perform ULM checks and services.
4. Take corrective actions.
 - a. Repair correctable deficiencies or shortcomings.
 - b. Evacuate the LRU with uncorrectable deficiencies to a higher maintenance level.
 - (1) Record equipment status.
 - (2) Report status to the ULLS clerk.
 - c. Document uncorrected shortcomings.
 - (1) Record actions taken.
 - (2) Schedule next maintenance.

Performance Measures

NOTE: Refer to TM 11-5895-1181-20 and (O)TM 11-5810-312-12-2 for performance measures 2 through 4.

	<u>GO</u>	<u>NO GO</u>
1. Identified ULM required. (Reviewed DA Form 5986-E.)	_____	_____
2. Assembled required resources.	_____	_____
3. Performed ULM checks and services.	_____	_____
4. Took corrective actions.	_____	_____
a. Repaired correctable deficiencies or shortcomings.		
b. Evacuated the LRU with uncorrectable deficiencies to a higher maintenance level.		
(1) Recorded equipment status.		
(2) Reported status to the ULLS clerk.		
c. Documented uncorrected shortcomings.		
(1) Recorded actions taken.		
(2) Scheduled next maintenance.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

(O)TM 11-5810-312-12-2
TM 11-5895-1181-20

Related

CECOMM
DA PAM 738-750
TM 11-5895-1180-20

Install Precision Lightweight Global Positioning System Receiver (PLGR)

113-589-1010

Conditions: Given a vehicle, PLGR navigation set AN/PSN-11, mounting kit, ANCD AN/CYZ-10 with fill, fill cable, tool kit TK-101/G, drill and drill bits from auto common No. 1, and TM 11-5825-291-13.

Standards: The PLGR successfully passed the BIT and displayed local grid coordinates to within an accuracy of 10 meters square.

Performance Steps

1. Inventory the complete AN/PSN-11 navigation system kit. (Refer to TM 11-5825-291-13.)
2. Mount installation kit.
 - a. Install mounting assembly.
 - b. Install power cable.
 - c. Install external antenna (if required).
 - d. Check for proper grounding.
3. Configure system components for operation.
 - a. Place components in mount.
 - b. Cable components.
 - c. Attach power and antenna cables.
4. Perform an operational check. (Refer to TM 11-5825-291-13.)
 - a. Enter fill.
 - b. Perform BIT.
 - c. Observe display to ensure PLGR displays acquisition of one satellite for time.
 - d. Observe display to ensure PLGR displays acquisition of five satellites for position/location.
 - e. Establish maintenance records.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Inventoried the complete AN/PSN-11 navigation system kit. (Refer to TM 11-5825-291-13.)	—	—
2. Mounted installation kit. <ol style="list-style-type: none"> a. Installed mounting assembly. b. Installed power cable. c. Installed external antenna (if required). d. Checked for proper grounding. 	—	—
3. Configured system components for operation. <ol style="list-style-type: none"> a. Placed components in mount. b. Cabled components. c. Attached power and antenna cables. 	—	—
4. Performed an operational check. (Refer to TM 11-5825-291-13.) <ol style="list-style-type: none"> a. Entered fill. b. Performed BIT. c. Observed display to ensure PLGR displayed acquisition of one satellite for time. d. Observed display to ensure PLGR displayed acquisition of five satellites for position/location. e. Established maintenance records. 	—	—

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

TM 11-5825-291-13

Related

(O)TM 11-5810-394-14&P

DA PAM 738-750

TM 11-5820-890-10-8

Troubleshoot Precision Lightweight Global Positioning System Receiver (PLGR)
113-589-0044

Conditions: Given an inoperable PLGR navigation set AN/PSN-11, digital multimeter AN/PSM-45(*), ANCD AN/CYZ-10 with fill, fill cable, DA Form 5988-E with one or more faults listed, tool kit TK-101/G, and TM 11-5825-291-13.

Standards: The PLGR passed the BIT; or evacuated the defective LRU to a higher maintenance level.

Performance Measures	<u>GO</u>	<u>NO GO</u>
NOTE: Refer to TM 11-5825-291-13 for all performance measures.		
1. Verified reported malfunctions.	_____	_____
a. Reviewed operator's actions.		
b. Performed visual inspection.		
2. Performed systematic troubleshooting procedures.	_____	_____
a. Turned off the AN/PSN-11 and reinitialized using premission operation.		
WARNING: Attempting to replace the memory battery while the equipment is turned off will result in the loss of all resident information.		
b. Performed BIT. If the BIT failed, corrected all stated faults or evacuated equipment to a higher maintenance level.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References	Related
Required	
TM 11-5825-291-13	(O)TM 11-5810-394-14&P
	DA PAM 738-750
	TM 11-5820-890-10-8
	TM 11-6625-3052-14
	TM 11-6625-3199-14

Perform Unit Level Maintenance (ULM) on Precision Lightweight Global Positioning System Receiver (PLGR)
113-589-3043

Conditions: Given a PLGR navigation set AN/PSN-11, digital multimeter AN/PSM-45(*), tool kit TK-101/G, TM 11-5825-291-13, and DA Form 5986-E.

Standards: Documented all shortcomings and corrected all deficiencies IAW TM 11-5825-291-13; or evacuated the equipment that had a major deficiency beyond unit maintenance level to a higher maintenance level.

Performance Steps

1. Identify which ULM is required. (Review DA Form 5986-E.)
2. Review technical sources for required support equipment.
3. Verify checks and adjustments. (Refer to TM 11-5825-291-13.)

WARNING: Unit level PMCS consist of replacing the memory battery annually or when necessary. Removing the memory battery while the PLGR power switch is in the OFF position will result in the loss of all resident information.

- a. Check memory battery.
 - b. Enter fill.
 - c. Perform BIT.
 - d. Observe to ensure PLGR displays acquisition of one satellite for time.
 - e. Observe to ensure PLGR displays acquisition of five satellites for position/location and displays grid coordinates to within an accuracy of 10 meters square.
4. Take corrective actions.
 - a. Repair correctable deficiencies.
 - b. Evacuate the LRU with uncorrectable deficiencies to a higher maintenance level.
 - (1) Record equipment status.
 - (2) Report status to the ULLS clerk.
 - c. Document uncorrected shortcomings.
 - (1) Record actions taken.
 - (2) Schedule next maintenance.

Performance Measures

1. Identified which ULM was required. (Reviewed DA Form 5986-E.)
2. Reviewed technical sources for required support equipment.
3. Verified checks and adjustments. (Refer to TM 11-5825-291-13.)

WARNING: Unit level PMCS consist of replacing the memory battery annually or when necessary. Removing the memory battery while the PLGR power switch is in the OFF position will result in the loss of all resident information.

- a. Checked memory battery.
 - b. Entered fill.
 - c. Performed BIT.
 - d. Observed to ensure PLGR displayed acquisition of one satellite for time.
 - e. Observed to ensure PLGR displayed acquisition of five satellites for position/location and displayed grid coordinates to within an accuracy of 10 meters square.
4. Took corrective actions.
 - a. Repaired correctable deficiencies.

GO NO GO

Performance Measures**GO NO GO**

- b. Evacuated the LRU with uncorrectable deficiencies to a higher maintenance level.
 - (1) Recorded equipment status.
 - (2) Reported status to the ULLS clerk.
- c. Documented uncorrected shortcomings.
 - (1) Recorded actions taken.
 - (2) Scheduled next maintenance.

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References**Required**

TM 11-5825-291-13

Related

DA PAM 738-750

TM 11-5820-890-10-8

TM 11-6625-3052-14

TM 11-6625-3199-14

**Troubleshoot Single-Channel Demand Assigned Multiple Access (DAMA) Tactical Satellite
Terminal AN/PSC-5
113-589-0045**

Conditions: Given radio set AN/PSC-5, digital multimeter AN/PSC-45, the ANCD with fill, fill cable, tool kit TK-101/G, TM 11-5825-1130-12&P, (O)TM 11-5810-394-14&P, and the technical manual for the ANCD.

Standards: The AN/PSC-5 radio set processed operational traffic; or evacuated the defective LRU to a higher maintenance level.

Performance Measures

NOTE: Refer to TM 11-5820-1130-12&P.

	<u>GO</u>	<u>NO GO</u>
1. Verified reported malfunctions.	_____	_____
a. Reviewed operator's actions.		
b. Performed visual inspection.		
2. Performed systematic troubleshooting procedures.	_____	_____
a. Sectionalized the systems. (Determined inoperable section.)		
b. Localized inoperable station. (Performed diagnostics.)		
c. Isolated the defective LRU.		
3. Took corrective actions.	_____	_____
a. Fixed or replaced the defective LRU. (Refer to the MAC.)		
b. Performed an operational check.		
c. Evacuated the LRU with uncorrectable deficiencies to a higher maintenance level.		
(1) Processed for a higher maintenance level.		
(2) Prepared maintenance records.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

(O)TM 11-5810-394-14&P
ANCD TM
TM 11-5820-1130-12&P

Related

Perform Scheduled Unit Level Maintenance (ULM) on Single-Channel Demand Assigned Multiple Access (DAMA) Tactical Satellite Terminal AN/PSC-5
113-589-3045

Conditions: Given radio set AN/PSC-5, digital multimeter AN/PSC-45, the ANCD with fill, fill cable, tool kit TK-101/G, TM 11-5820-1130-12&P, technical manual for the ANCD, AN/PSM-45, DA Form 2404, and DA Form 5988-E.

Standards: Documented all shortcomings on DA Form 2404 or DA Form 5988-E and corrected all deficiencies IAW TM 11-5820-1130-12&P; or evacuated the equipment that had a major deficiency beyond unit level maintenance to a higher maintenance level.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Identified ULM required. (Reviewed DA Form 5988-E.)	_____	_____
2. Assembled required resources.	_____	_____
3. Performed ULM checks and services.	_____	_____
4. Took corrective actions.	_____	_____
a. Repaired correctable deficiencies or shortcomings.		
b. Evacuated the LRU with uncorrectable deficiencies to a higher maintenance level.		
(1) Recorded equipment status.		
(2) Reported status to the ULLS clerk.		
c. Documented uncorrected shortcomings.		
(1) Recorded actions taken.		
(2) Scheduled next maintenance.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References	Related
Required	
ANCD TM	DA PAM 738-750
TM 11-5820-1130-12&P	
TM 11-6625-3052-14	

Troubleshoot Single-Channel Anti-Jam Man Portable (SCAMP) Tactical Satellite Terminal AN/PSC-11
113-589-0046

Conditions: Given radio set AN/PSC-11, digital multimeter AN/PSC-45, ANCD with fill, fill cable, tool kit TK-101/G, TM 11-5825-1157-10, TM 11-5825-1157-20&P, and technical manual for the ANCD.

Standards: The AN/PSC-11 radio set processed operational traffic; or evacuated the defective LRU to a higher maintenance level.

Performance Measures

NOTE: Refer to TM 11-5820-1157-10 and TM 11-5820-1157-20&P.

	<u>GO</u>	<u>NO GO</u>
1. Verified reported malfunctions.	_____	_____
a. Reviewed operator's actions.		
b. Performed visual inspection.		
2. Performed systematic troubleshooting procedures.	_____	_____
a. Sectionalized the systems. (Determined inoperable section.)		
b. Localized inoperable station. (Performed diagnostics.)		
c. Isolated the defective LRU.		
3. Took corrective actions.	_____	_____
a. Fixed or replaced the defective LRU. (Refer to the MAC.)		
b. Performed an operational check.		
c. Evacuated the LRU with uncorrectable deficiencies to a higher maintenance level.		
(1) Processed for a higher maintenance level.		
(2) Prepared maintenance records.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

ANCD TM

DTM 11-5825-1157-10

DTM 11-5825-1157-20&P

Related

Perform Scheduled Unit Level Maintenance (ULM) on Single Channel Anti-Jam Man Portable (SCAMP) Tactical Satellite Terminal AN/PSC-11
113-589-3046

Conditions: Given radio set AN/PSC-11, digital multimeter AN/PSC-45, ANCD with fill, fill cable, tool kit TK-101/G, TM 11-5825-1157-10, TM 11-5825-1157-20&P, technical manual for the ANCD, AN/PSM-45, and DA Form 2404 or DA Form 5988-E.

Standards: Documented all shortcomings on DA Form 2404 or DA Form 5988-E and corrected all deficiencies IAW TM 11-5825-1157-20&P; or evacuated the equipment that had a major deficiency beyond unit level maintenance level to a higher maintenance level.

Performance Measures	<u>GO</u>	<u>NO GO</u>
NOTE: Refer to TM 11-5820-1157-10 and TM 11-5820-1157-20&P.		
1. Identified ULM required. (Reviewed DA Form 5988-E.)	_____	_____
2. Assembled required resources.	_____	_____
3. Performed ULM checks and services.	_____	_____
4. Took corrective actions.	_____	_____
a. Repaired correctable deficiencies or shortcomings.		
b. Evacuated the LRU with uncorrectable deficiencies to a higher maintenance level.		
(1) Recorded equipment status.		
(2) Reported status to the ULLS clerk.		
c. Documented uncorrected shortcomings.		
(1) Recorded actions taken.		
(2) Scheduled next maintenance.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References	Related
Required	
ANCD TM	DA PAM 738-750
DTM 11-5825-1157-10	
DTM 11-5825-1157-20&P	

Subject Area 7: Communications Systems

Troubleshoot Communications Equipment Within the Standardized Integrated Command Post System (SICPS)
113-580-0054

Conditions: Given an SICPS with inoperable communications equipment and serviceable CHS; maintenance and diagnostics (M&D) software; digital multimeter AN/PSM-45(*), radio test set AN/PRM-34(*), tool kit TK-101/G; TM 11-7010-256-12&P for the tracked command post (M1068) version or TM 11-7010-258-12&P for the STCP version or TM 11-7010-260-12&P for the RWS version; DA Form 5988-E, and DA Form 5990-E.

Standards: The communications equipment passed operational traffic; or evacuated the defective LRU to a higher maintenance level.

Performance Steps

1. Verify reported malfunctions.
 - a. Certify communications equipment installation.
 - b. Verify operator's troubleshooting procedures.
2. Isolate malfunctions. (Refer to TM 11-7010-256-12&P for the M1068 version, TM 11-7010-258-12&P for the STCP version, and TM 11-7010-260-12&P for the RWS version.)
 - a. Perform on-line diagnostics procedures.
 - b. Perform off-line diagnostics procedures.
 - c. Consult symptom index.
 - d. Refer to the troubleshooting flowchart.
3. Take corrective actions.
 - a. Test the LRU.
 - b. Repair the LRU.
 - c. Replace unserviceable parts.
 - d. Perform an operational test.
 - e. Requisition unserviceable parts not on hand.
4. Correct the defective LRU outside of unit level authorization.
 - a. Document actions taken.
 - b. Return DA Form 5988-E and obtain DA Form 5990-E from the ULLS clerk.
 - c. Evacuate the defective LRU outside of the maintenance allocation authorization to a higher maintenance level.

Performance Measures

	<u>GO</u>	<u>NO GO</u>
1. Verified reported malfunctions.	_____	_____
a. Certified communications equipment installation.		
b. Verified operator's troubleshooting procedures.		
2. Isolated malfunctions. (Refer to TM 11-7010-256-12&P for the M1068 version, TM 11-7010-258-12&P for the STCP version, and TM 11-7010-260-12&P for the RWS version.)	_____	_____
a. Performed on-line diagnostics procedures.		
b. Performed off-line diagnostics procedures.		
c. Consulted symptom index.		
d. Referred to the troubleshooting flowchart.		
3. Took corrective actions.	_____	_____

Performance Measures	<u>GO</u>	<u>NO GO</u>
a. Tested the LRU.		
b. Repaired the LRU.		
c. Replaced unserviceable parts.		
d. Performed an operational test.		
e. Requisitioned unserviceable parts not on hand.		
4. Corrected the defective LRU outside of unit level authorization.	—	—
a. Documented actions taken.		
b. Returned DA Form 5988-E and obtained DA Form 5990-E from the ULLS clerk.		
c. Evacuated the defective LRU outside of the maintenance allocation authorization to a higher maintenance level.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

- TM 11-7010-256-12&P
- TM 11-7010-258-12&P
- TM 11-7010-260-12&P

Related

- DA PAM 738-750
- DTM 11-7025-308-12&P
- TM 11-5820-401-20-1
- TM 11-5820-401-20-2
- TM 11-5820-890-20-1
- TM 11-5820-890-20-2
- TM 11-5895-1546-12&P
- TM 11-6030-210-12
- TM 11-6130-476-12&P
- TM 11-6625-3015-14
- TM 11-6625-3052-14
- TM 11-6625-3199-14
- TM 11-7021-213-12&P
- TM 11-7025-280-12&P
- TM 11-7025-281-12&P
- TM 11-7025-283-12&P

Perform Unit Level Maintenance (ULM) on Communications Equipment Within the Standardized Integrated Command Post System (SICPS)

113-580-3071

Conditions: Given an SICPS with associated communications equipment, tool kit TK-101/G; TM 11-7010-256-12&P for the tracked command post (M1068) version, TM 11-7010-258-12&P for the STCP version, or TM 11-7010-260-12&P for the RWS version; DA Form 5986-E, and DA Form 5988-E.

Standards: Documented all shortcomings and corrected all deficiencies IAW TM 11-7010-256-12&P or TM 11-7010-258-12&P or TM 11-7010-260-12&P; or evacuated the equipment that had a major deficiency beyond unit maintenance level to a higher maintenance level.

Performance Measures

GO **NO GO**

NOTE: Refer to TM 11-7010-256-12&P for the M1068 version, TM 11-7010-258-12&P for the STCP version, and TM 11-7010-260-12&P for the RWS version for performance measures 2 and 3 unless otherwise indicated.

- | | | |
|--|-------|-------|
| 1. Identified service to be performed. (Reviewed DA Form 5986-E.) | _____ | _____ |
| 2. Verified operator's performance of PMCS. | _____ | _____ |
| 3. Certified that the equipment met the operational criteria. | _____ | _____ |
| a. Verified serviceability. (Performed ULM.) | | |
| b. Corrected items that did not meet the operational criteria. (Refer to the MAC authorization.) | | |
| (1) Tested the LRU. | | |
| (2) Repaired the LRU. | | |
| (3) Replaced unserviceable parts. | | |
| (4) Requisitioned unserviceable parts not on hand. | | |
| c. Performed an operational test on the serviceable LRU. | | |
| d. Documented actions taken. | | |
| 4. Returned DA Form 5986-E to the ULLS clerk. | _____ | _____ |

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

BFACS SUM
TM 11-7010-256-12&P
TM 11-7010-258-12&P
TM 11-7010-260-12&P

Related

DA PAM 738-750
DTM 11-7025-308-12&P
FM 24-7
TM 11-5895-1348-13&P
TM 11-5895-1546-12&P
TM 11-6030-210-12
TM 11-6130-476-12&P
TM 11-7021-213-12&P
TM 11-7021-217-12&P
TM 11-7025-280-12&P
TM 11-7025-281-12&P
TM 11-7025-283-12&P

Perform Scheduled Unit Level Maintenance (ULM) on Antenna Group OE-254/GRC or a Similar Antenna System
113-596-3051

Conditions: Given antenna group OE-254/GRC or a similar antenna system, digital multimeter AN/PSM-45(*), test set AN/PRM-34(*), tool kit TK-101/G, TM 11-5985-357-13, and DA Form 5986-E.

Standards: Documented all shortcomings and corrected all deficiencies IAW TM 11-5985-357-13..

Performance Steps

1. Review DA Form 5986-E for scheduled maintenance.
2. Assemble required material. (Refer to TM 11-5895-357-13 or technical manual required by specific equipment to be maintained.)
3. Perform ULM checks and services. (Refer to the PMCS table in TM 11-5895-357-13 or equivalent tables in the technical manuals of similar antenna groups to visually inspect equipment for routine checks and services.)
4. Take corrective actions. (Refer to TM 11-5985-357-13 or equivalent technical manuals for other antenna groups.)
 - a. Repair correctable deficiencies or shortcomings.
 - (1) Replace unserviceable parts.
 - (2) Perform an operational check.
 - (3) Requisition unserviceable parts not on hand.
 - (4) Record equipment status.
 - (5) Report status to the ULLS clerk.
 - b. Document uncorrected shortcomings.
 - (1) Record actions taken.
 - (2) Schedule next maintenance.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Reviewed DA Form 5986-E for scheduled maintenance.	—	—
2. Assembled required material. (Refer to TM 11-5985-357-13 or the technical manual required by the specific equipment to be maintained.)	—	—
3. Performed ULM checks and services. (Refer to the PMCS table in TM 11-5985-357-13 or equivalent tables in the technical manuals of similar antenna groups to visually inspect equipment for routine checks and services.)	—	—
4. Took corrective actions. (Refer to TM 11-5985-357-13 or equivalent technical manuals of other antenna groups.) <ol style="list-style-type: none"> a. Repaired correctable deficiencies or shortcomings. <ol style="list-style-type: none"> (1) Replaced unserviceable parts. (2) Performed an operational check. (3) Requisitioned unserviceable parts not on hand. (4) Recorded equipment status. (5) Reported status to the ULLS clerk. b. Documented uncorrected shortcomings. <ol style="list-style-type: none"> (1) Recorded uncorrected shortcomings. (2) Scheduled next maintenance. 	—	—

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

TM 11-5985-357-13

Related

TM 11-5820-348-15

TM 11-5820-467-15

TM 11-5985-370-12

TM 11-6625-3015-14

TM 11-6625-3052-14

TM 11-6625-3199-14

Subject Area 8: Facsimile Equipment

**Install Tactical Lightweight Digital Facsimile (LDF) AN/UXC-7 or a Similar System
113-597-1002**

Conditions: Given a designated vehicle, tactical LDF AN/UXC-7 or a similar system, tool kit TK-101/G, drill and drill bits from auto common No. 1, TM 11-5815-615-23, SB 11-131-1, DA Form 5988-E, and DA Form 5986-E.

Standards: Installed the facsimile system and processed clear copies to a distant terminal.

Performance Steps

1. Inventory complete radio system and accessories. (Refer to TM 11-5815-615-23 and SB 11-131-1.)
2. Install installation kit. (Refer to TM 11-5815-615-23.)
3. Mount system components. (Refer to TM 11-5815-615-23.)
4. Perform self-test. (Refer to TM 11-5815-615-23.)
5. Send test copy to a distant station.
6. Establish maintenance records (DA Form 5986-E and DA Form 5988-E).

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Inventoried complete radio system kit and accessories. (Refer to TM 11-5815-615-23 and SB 11-131-1.)	—	—
2. Installed installation kit. (Refer to TM 11-5815-615-23.)	—	—
3. Mounted system components. (Refer to TM 11-5815-615-23.)	—	—
4. Performed self-test. (Refer to TM 11-5815-615-23.)	—	—
5. Sent test copy to a distant terminal.	—	—
6. Established maintenance records (DA Form 5986-E and DA Form 5988-E).	—	—

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

SB 11-131-1
TM 11-5815-615-23

Related

DA PAM 738-750
TM 11-6625-3052-14
TM 11-6625-3199-14

Troubleshoot Tactical Lightweight Digital Facsimile (LDF) AN/UXC-7 or a Similar System

113-597-0002

Conditions: Given an inoperable tactical LDF AN/UXC-7 in a communications network, DA Form 5988-E with one or more faults listed, digital multimeter AN/PSM-45(*), tool kit TK-101/G, DA Form 5990-E, manufacturer's (MFG) manuals, and TM 11-5815-615-23.

Standards: Corrected all faults IAW TM 11-5815-615-23 or MFG manuals; or evacuated the defective equipment to a higher maintenance level.

Performance Steps

1. Verify reported malfunctions.
 - a. Review operator's corrective actions.
 - b. Perform visual inspections.
 - (1) Check power connections.
 - (2) Ensure scan-optic lens are free of foreign material.
 - c. Perform equipment self-test; the self-test initiates the BIT functions.
2. Perform systematic troubleshooting procedures.
 - a. Determine the inoperative stations.
 - (1) Check connection between stations.
 - (2) Attempt communications check with alternate stations.
 - b. Perform on-line diagnostics.
 - c. Isolate the defect to the LRU.
 - (1) External problem isolation.
 - (2) Parallel problems isolation.
 - (3) Use the appropriate troubleshooting flowchart to isolate the failure to the LRU.
3. Take corrective actions.
 - a. Fix or replace the inoperable LRU. (Refer to the MAC.)
 - b. Restore the tactical LDF to operation and update the maintenance records if fault is corrected.
 - c. If fault cannot be corrected at unit level, evacuate the inoperable LRU to a higher maintenance level.
 - d. Complete DA Form 5590-E.

Performance Measures

NOTE: Refer to TM 11-5815-615-23 for all performance measures.

- | | <u>GO</u> | <u>NO GO</u> |
|---|-----------|--------------|
| 1. Verified reported malfunctions. | _____ | _____ |
| a. Reviewed operator's corrective actions. | | |
| b. Performed visual inspection. | | |
| (1) Checked power connections. | | |
| (2) Ensured scan-optic lens were free of foreign material. | | |
| c. Performed equipment self-test; the self-test initiates the BIT functions. | | |
| 2. Performed systematic troubleshooting procedures. | _____ | _____ |
| a. Determined the inoperable station. | | |
| (1) Checked connection between stations. | | |
| (2) Attempted communications check with alternate stations. | | |
| b. Performed on-line diagnostics. | | |
| c. Isolated the defect to the LRU. | | |
| (1) External problem isolation. | | |
| (2) Parallel problem isolation. | | |
| (3) Used the appropriate troubleshooting flowchart to isolate the failure to the LRU. | | |

Performance Measures

GO **NO GO**

- | | |
|---|---------------------------|
| <p>3. Took corrective actions.</p> <ul style="list-style-type: none"> a. Fixed or replaced the inoperable LRU. (Refer to the MAC.) b. Restored the tactical LDF to operation and updated the maintenance records if fault was corrected. c. If fault could not be corrected at unit level, evacuated the inoperable LRU to a higher maintenance level. d. Completed DA Form 5990-E. | <p>_____</p> <p>_____</p> |
|---|---------------------------|

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

MFG MANUALS
TM 11-5815-615-23

Related

DA PAM 738-750
TM 11-6625-3052-14
TM 11-6625-3199-14

**Perform Scheduled Unit Level Maintenance (ULM) on Tactical Lightweight Digital Facsimile (LDF)
AN/UXC-7 or a Similar System
113-597-3002**

Conditions: Given a tactical LDF AN/UXC-7 or a similar system, digital multimeter AN/PSM-45(*), tool kit TK-101/G, TM 11-5815-615-23, manufacturer's (MFG) manuals, DA Form 5986-E, and DA Form 5988-E.

Standards: Documented all shortcomings and corrected all deficiencies IAW TM 11-5815-615-23 or MFG manuals; or evacuated the equipment that had a major deficiency beyond unit maintenance level to a higher maintenance level.

Performance Steps

1. Review DA Form 5986-E for scheduled maintenance.
2. Collect material required.
3. Perform ULM checks and services.
 - a. Verify operator's PMCS.
 - b. Perform routine checks and services.
4. Take corrective actions.
 - a. Repair the LRU.
 - (1) On site.
 - (2) Request a higher maintenance level.
 - b. Replace or repair the LRU.
 - c. Perform an operational check.
 - d. Schedule next maintenance.

Performance Measures

NOTE: Refer to TM 11-5815-615-23 for performance measures 2 through 4.

	<u>GO</u>	<u>NO GO</u>
1. Reviewed DA Form 5986-E for scheduled maintenance.	_____	_____
2. Collected material required.	_____	_____
3. Performed ULM checks and services. <ol style="list-style-type: none"> a. Verified operator's PMCS. b. Performed routine checks and services. 	_____	_____
4. Took corrective actions. <ol style="list-style-type: none"> a. Repaired the LRU. <ol style="list-style-type: none"> (1) On site. (2) Requested a higher maintenance level. b. Replaced or repaired the LRU. c. Performed an operational check. d. Scheduled next maintenance. 	_____	_____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

MFG MANUALS
TM 11-5815-615-23

Related

TM 11-6625-3052-14
TM 11-6625-3199-14

Subject Area 9: Communications Security Equipment

**Restore to Operation Automated Net Control Device (ANCD) AN/CYZ-10 or Equivalent Equipment
113-609-4007**

Conditions: Given an inoperable ANCD AN/CYZ-10, a lightweight computer unit (LCU), loaded ANCD (Source) AN/CYZ-10, fill cable, (O)TM 11-5810-394-14&P, TB 11-5820-890-12, ANCD Manufacturer's (MFG) Operator (OPR) Manual, unit's SOI, DA Form 2404, and DA Form 5988-E.

Standards: The ANCD successfully transferred data; or evacuated the defective LRU to a higher maintenance level.

Performance Steps

1. Verify reported malfunctions.
 - a. Review operator's actions.
 - b. Perform visual inspection.
2. Perform systematic troubleshooting procedures.
 - a. Perform BIT.
 - b. View unit's SOI information.
 - c. View radio database.
 - d. Perform data transfer.
3. Take corrective actions.
 - a. Initialize the crypto ignition key (CIK). (Refer to TB 11-5820-890-12.)
 - b. Clone missing database file. (Refer to the ANCD MFG OPR Manual.)
 - c. Reload data using the ANCD (source) or LCU.
 - d. Perform data transfer.
 - e. Evacuate the defective LRU to a higher maintenance level.
 - (1) Process for a higher maintenance level.
 - (2) Prepare maintenance forms.

Performance Measures

NOTE: Refer to (O)TM 11-5810-394-14&P, TB 11-5820-890-12, and the ANCD MFG OPR Manual for all performance measures.

	<u>GO</u>	<u>NO GO</u>
1. Verified reported malfunctions.	_____	_____
a. Reviewed operator's actions.		
b. Performed visual inspection.		
2. Performed systematic troubleshooting procedures.	_____	_____
a. Performed BIT.		
b. Viewed unit's SOI information.		
c. Viewed radio database.		
d. Performed data transfer.		
3. Took corrective actions.	_____	_____
a. Initialized the CIK. (Refer to TB 11-5820-890-12.)		
b. Cloned missing database file. (Refer to the ANCD MFG OPR Manual.)		
c. Reloaded data using the ANCD (source) or LCU.		
d. Performed data transfer.		
e. Evacuated the defective LRU to a higher maintenance level.		
(1) Processed for a higher maintenance level.		
(2) Prepared maintenance forms.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References**Required**

(O)TM 11-5810-394-14&P
ANCD MFG OPR MANUAL
TB 11-5820-890-12
UNIT SOI

Related

DA PAM 738-750
FM 11-32

Subject Area 10: High/Ultra High Frequency Radios

**Install Improved High Frequency Radio (IHFR) Set AN/GRC-213 or a Similar System
113-620-1040**

Conditions: Given a designated vehicle; IHFR set AN/GRC-213 or a similar system; KY-99; appropriate installation kit MK-2442 or MK-2443 or MK-2444 or MK-2445 or MK-2446 or MK-2447 or MK-2459 or MK-2541 or MK-2544; digital multimeter AN/PSM-45(*); tool kit TK-101/G; drill and drill bits from auto common No. 1; TM 11-5820-923-12, and TM 11-2300-476-14&P.

Standards: Mounted the radio set on its platform and passed traffic without error.

Performance Steps

1. Inventory installation kit. (Refer to TM 11-5820-923-12 and TM 11-2300-476-14&P.)
2. Install installation kit. (Refer to TM 11-5820-923-12 and TM 11-233-476-14&P.)
 - a. Install mounting assembly.
 - b. Install antenna bracket.
 - c. Install antenna cables.
 - d. Install power cables.
 - e. Check for ground.
3. Configure system components. (Refer to TM 11-5820-923-12, TM 11-2300-476-14&P, or the technical manual for the appropriate IHFR set to be installed.)
4. Perform an operational check. (Refer to TM 11-5820-923-12, TM 11-2300-476-14&P, or the technical manual of the appropriate IHFR set to be installed.)
5. Establish maintenance records.

Performance Measures

	<u>GO</u>	<u>NO GO</u>
1. Inventoried installation kit. (Refer to TM 11-5820-923-12 and TM 11-2300-476-14&P.)	—	—
2. Installed installation kit. (Refer to TM 11-5820-923-12 and TM 11-2300-476-14&P.) <ol style="list-style-type: none"> a. Installed mounting assembly. b. Installed antenna bracket. c. Installed antenna cables. d. Installed power cable. e. Checked for ground. 	—	—
3. Configured system components. (Refer to TM 11-5820-923-12, TM 11-2300-476-14&P, or the technical manual for the appropriate IHFR set to be installed.) <ol style="list-style-type: none"> a. Placed components in mount. b. Cabled components. c. Attached power cable. d. Attached antenna cables. 	—	—
4. Performed an operational check. (Refer to TM 11-5820-923-12, TM 11-2300-476-14&P, or the technical manual of the appropriate IHFR set to be installed.)	—	—
5. Established maintenance records.	—	—

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References**Required**

TM 11-2300-476-14&P

TM 11-5820-923-12

Related

DA PAM 738-750

TM 11-2300-475-13&P-2

TM 11-2300-475-13&P-6

TM 11-5820-924-13

TM 11-6625-3052-14

TM 11-6625-3199-14

Troubleshoot Improved High Frequency Radio (IHFR) Set AN/GRC-213 or a Similar System

113-620-0107

Conditions: Given an inoperable AN/GRC-213 or a similar IHFR system, KY-99, digital multimeter AN/PSM-45(*), tool kit TK-101/G, and TM 11-5820-923-12.

Standards: The radio passed operational traffic; or evacuated the defective LRU to a higher maintenance level.

Performance Steps

1. Verify reported malfunctions.
 - a. Review operator's actions.
 - b. Perform visual inspection.
2. Perform systematic troubleshooting procedures.
 - a. Sectionalize system. (Determine inoperative station.)
 - b. Localize inoperable station. (Perform on-line diagnostics.)
 - c. Isolate the defect to the LRU. (Perform off-line measurements.)
3. Take corrective actions.
 - a. Fix or replace the defective LRU. (Refer to the MAC.)
 - b. Evacuate the LRU with uncorrectable deficiencies to a higher maintenance level.
 - (1) Process for a higher maintenance level.
 - (2) Prepare maintenance forms.

Performance Measures

NOTE: Refer to TM 11-5820-923-12 for all performance measures.

	<u>GO</u>	<u>NO GO</u>
1. Verified reported malfunction.	_____	_____
a. Reviewed operator's actions.		
b. Performed visual inspection.		
2. Performed systematic troubleshooting procedures.	_____	_____
a. Sectionalized system. (Determined inoperable station.)		
b. Localized inoperable station. (Performed on-line diagnostics.)		
c. Isolated the defect to the LRU. (Performed off-line measurements.)		
3. Took corrective actions.	_____	_____
a. Fixed or replaced the defective LRU. (Refer to the MAC.)		
b. Evacuated the LRU with uncorrectable deficiencies to a higher maintenance level.		
(1) Processed for a higher maintenance level.		
(2) Prepared maintenance forms.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

TM 11-5820-923-12

Related

DA PAM 738-750
 TM 11-5820-919-12
 TM 11-5820-924-13
 TM 11-6625-3052-14

**References
Required**

Related
TM 11-6625-3199-14

Perform Scheduled Unit Level Maintenance (ULM) on Improved High Frequency Radio (IHFR) Set AN/GRC-213 or a Similar System

113-620-3059

Conditions: Given radio set AN/GRC-213 or a similar system, KY-99, digital multimeter AN/PSM-45(*), tool kit TK-101/G, and TM 11-5820-923-12.

Standards: Documented all shortcomings and corrected all deficiencies IAW TM 11-5820-923-12; or evacuated the equipment that had a major deficiency beyond unit maintenance level to a higher maintenance level.

Performance Steps

1. Identify maintenance to be performed.
2. Assemble required materials. (Refer to TM 11-5820-923-12 or the technical manual required by the specific equipment to be maintained.)
3. Perform ULM check and services. (Refer to PMCS table in TM 11-5820-923-13 or equivalent tables in technical manuals of similar equipment.)
4. Take corrective actions as necessary. (Refer to TM 11-5820-923-12 or equivalent technical manuals of other IHFR systems.)
 - a. Repair correctable deficiencies or shortcomings. (Refer to the MAC.)
 - b. Evacuate the LRU with uncorrectable deficiencies to a higher maintenance level.
 - (1) Report equipment status.
 - (2) Report status to the ULLS clerk.
 - c. Document uncorrected shortcomings.
 - (1) Record actions taken.
 - (2) Schedule next maintenance.

Performance Measures

	<u>GO</u>	<u>NO GO</u>
1. Identified maintenance to be performed.	—	—
2. Assembled required materials. (Refer to TM 11-5820-923-12 or the technical manual required by the specific equipment to be maintained.)	—	—
3. Performed ULM checks and services. (Refer to the PMCS table in TM 11-5820-923-12 or equivalent tables in technical manuals of similar IHFR sets.)	—	—
4. Took corrective actions as necessary. (Refer to TM 11-5820-923-12 or equivalent technical manuals of other IHFR systems.) <ol style="list-style-type: none"> a. Repaired correctable deficiencies or shortcomings. (Refer to the MAC.) b. Evacuated the LRU with uncorrectable deficiencies to a higher maintenance level. <ol style="list-style-type: none"> (1) Recorded equipment status. (2) Reported status to the ULLS clerk. c. Documented uncorrected shortcomings. <ol style="list-style-type: none"> (1) Recorded actions taken. (2) Scheduled next maintenance. 	—	—

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

TM 11-5820-923-12

Related

TM 11-5820-1046-12
TM 11-5820-1046-20P
TM 11-5820-1047-12
TM 11-5820-1047-20P
TM 11-5820-919-12
TM 11-5820-923-20P
TM 11-5820-924-13
TM 11-6625-3052-14
TM 11-6625-3199-14

Install Enhanced Position Location Reporting System (EPLRS) Radio Set AN/VSQ-2(V)1/(V)2 113-630-1008

Conditions: Given a designated vehicle, EPLRS radio set AN/VSQ-2(V)2, EPLRS installation kit, tool kit TK-101/G, drill and drill bits from auto common No. 1, and TM 11-5825-283-23.

Standards: Installed the EPLRS radio set AN/VSQ-2(V)2 on its platform and passed the self-test and the -N message response test.

Performance Measures

NOTE: Refer to TM 11-5825-283-23 for performance measures 1 through 4.

	<u>GO</u>	<u>NO GO</u>
1. Inventoried installation kit. (Refer to packing list.)	_____	_____
2. Mounted installation kit. <ul style="list-style-type: none"> a. Installed mounting assembly. b. Installed antenna bracket. c. Installed antenna cable. d. Installed power cable. e. Checked for ground. 	_____	_____
3. Configured system components for operation. <ul style="list-style-type: none"> a. Placed components in mount. b. Cabled components. c. Attached power cable. d. Attached antenna cable. e. Connected user readout (URO). 	_____	_____
4. Performed initial tests. <ul style="list-style-type: none"> a. Ran the self-test. b. Ran the -N message response test. 	_____	_____
5. Established maintenance records.	_____	_____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

TM 11-5825-283-23

Related

(O)TM 11-5810-394-14&P
DA PAM 738-750
SB 11-131-1
SB 11-131-2
TM 11-5825-283-10
TM 11-6625-3052-14
TM 11-6625-3199-14

Troubleshoot Enhanced Position Location Reporting System (EPLRS) Radio Set AN/VSQ-2(V)1/(V)2
113-630-0005

Conditions: Given an inoperable EPLRS radio set AN/VSQ-2(V)2, digital multimeter AN/PSM-45(*), tool kit TK-101/G, ANCD AN/CYZ-10 with fill, fill cable, and TM 11-5825-283-23.

Standards: Corrected all faults IAW TM 11-5825-283-23; or evacuated the defective LRU to a higher maintenance level.

Performance Measures	<u>GO</u>	<u>NO GO</u>
NOTE: Refer to TM 11-5825-283-23 for all performance measures.		
1. Verified reported malfunction.	_____	_____
a. Reviewed operator's actions.		
b. Performed visual inspection.		
c. Performed preliminary servicing and adjustment checks.		
2. Performed systematic troubleshooting procedures. (Refer to the radio set test.)	_____	_____
a. Zeroized the radio set.		
b. Reloaded the radio set.		
c. Isolated the defect to the LRU. (Performed radio set test.)		
3. Took corrective actions.	_____	_____
a. Fixed or replaced the defective LRU. (Refer to the MAC.)		
b. Evacuated the LRU with uncorrectable deficiencies to a higher maintenance level.		
(1) Processed for a higher maintenance level.		
(2) Prepared maintenance records.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

TM 11-5825-283-23

Related

(O)TM 11-5810-394-14&P
DA PAM 738-750
TM 11-5825-283-10
TM 11-5825-283-10-1
TM 11-6625-3052-14
TM 11-6625-3199-14

Perform Scheduled Unit Level Maintenance (ULM) on Enhanced Position Location Reporting System (EPLRS) Radio Set AN/VSQ-2(V)2
113-630-3015

Conditions: Given an EPLRS radio set AN/VSQ-2(V)2 and TM 11-5825-283-23.

Standards: Documented all shortcomings and corrected all deficiencies IAW TM 11-5825-283-23; or evacuated the equipment that had a major deficiency beyond unit maintenance level to a higher maintenance level.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Identified ULM required.	_____	_____
2. Verified operator's PMCS.	_____	_____
3. Performed ULM check and services. (Refer to TM 11-5825-283-23.)	_____	_____
a. Checked RT keep-alive battery.		
b. Performed self-test to ensure the unit passed the -N message response test.		
4. Took corrective actions.	_____	_____
a. Repaired correctable deficiencies. (Refer to the MAC.)		
b. Evacuated LRUs with uncorrectable deficiencies to a higher maintenance level.		
(1) Recorded equipment status.		
(2) Reported status to the ULLS clerk.		
c. Documented uncorrected shortcomings.		
(1) Recorded actions taken.		
(2) Scheduled next maintenance.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

TM 11-5825-283-23

Related

(O)TM 11-5810-394-14&P

DA PAM 738-750

TM 11-5825-283-10

Subject Area 11: Mobile Subscriber Equipment (MSE)

**Install Mobile Subscriber Radiotelephone Terminal (MSRT) AN/VRC-97
113-625-1038**

Conditions: Given an MSRT AN/VRC-97, DNV T TA-1035, DSV T KY-68, designated vehicle, digital multimeter AN/PSM-45(*), tool kit TK-101/G, drill and drill bits from auto common No. 1, MK-2564 or MK-2565, TM 11-5820-1021-23&P, TM 11-5805-761-13&P, and (O)TM 11-5810-329-23.

Standards: Mounted the MSRT AN/VRC-97 on its platform and passed traffic without error.

Performance Steps

- 1. Inventory installation kit and accessories.
- 2. Install installation kit.
 - a. Install mounting assembly.
 - b. Install antenna bracket.
 - c. Install antenna cables.
 - d. Install power cables.
 - e. Check for ground.
- 3. Configure system components.
 - a. Place components in mount.
 - b. Cable components.
 - c. Attach power cable.
 - d. Attach antenna cables.
- 4. Perform an operational check. (Pass traffic.)
 - a. Perform manual download.
 - b. Perform cable download.
 - c. Check remote installation.
- 5. Establish maintenance records.

Performance Measures	GO	NO GO
NOTE: Refer to TM 11-5820-1021-23&P, TM 11-5805-761-13&P, and (O)TM 11-5810-329-23 for performance measures 1 through 4.		
1. Inventoried installation kit and accessories.	_____	_____
2. Installed installation kit. <ul style="list-style-type: none">a. Installed mounting assembly.b. Installed antenna bracket.c. Installed antenna cables.d. Installed power cables.e. Checked for ground.	_____	_____
3. Configured system components. <ul style="list-style-type: none">a. Placed components in mount.b. Cabled components.c. Attached power cable.d. Attached antenna cables.	_____	_____
4. Performed an operational check. (Passed traffic.) <ul style="list-style-type: none">a. Performed manual download.b. Performed cable download.	_____	_____

Performance Measures

- c. Checked remote installation.
- 5. Established maintenance records.

GO **NO GO**

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

(O)TM 11-5810-329-23
TM 11-5805-761-13&P
TM 11-5820-1021-23&P

Related

TM 11-6625-3052-14
TM 11-6625-3199-14

Troubleshoot Mobile Subscriber Radiotelephone Terminal (MSRT) AN/VRC-97 System
113-625-0029

Conditions: Given an inoperable MSRT AN/VRC-97 in a communications network, DNV T TA-1035/U, DSV T KY-68, DA Form 5988-E with one or more faults listed, digital multimeter AN/PSM-45(*), tool kit TK-101/G, DA Form 5990-E, TM 11-5805-761-13&P, (O)TM 11-5810-329-23, and TM 11-5820-1021-23&P.

Standards: The MSRT passed operational traffic; or evacuated the defective LRU to a higher maintenance level.

Performance Steps

1. Verify reported malfunctions.
 - a. Review operator's procedures.
 - b. Perform visual inspection.
 - c. Perform equipment BATT-TEST/BIT; the self-test initiates the BIT functions.
2. Perform systematic troubleshooting procedures.
 - a. Determine inoperable station.
 - (1) Check connections between stations.
 - (2) Attempt communication check between alternate stations.
 - b. Isolate the defect to the LRU, using the appropriate troubleshooting flowchart.
3. Take corrective actions.
 - a. Fix or replace the inoperable LRU. (Refer to the MAC.)
 - b. Perform an operational check and update the maintenance records if fault is corrected.
 - c. If fault cannot be corrected at unit level, evacuate the inoperable LRU to a higher maintenance level.
 - d. Complete DA Form 5990-E.

Performance Measures

NOTE: Refer to TM 11-5820-1021-23&P, TM 11-5805-761-13&P, and (O)TM 11-5810-329-23 for all performance measures.

	<u>GO</u>	<u>NO GO</u>
1. Verified reported malfunctions. <ol style="list-style-type: none">a. Reviewed operator's procedures.b. Performed visual inspection.c. Performed equipment BATT-TEST/BIT; the self-test initiated the BIT functions.	_____	_____
2. Performed systematic troubleshooting procedures. <ol style="list-style-type: none">a. Determined inoperable station.<ol style="list-style-type: none">(1) Checked connections between stations.(2) Attempted communication check between alternate stations.b. Isolated the defect to the LRU, using the appropriate troubleshooting flowchart.	_____	_____
3. Took corrective actions. <ol style="list-style-type: none">a. Fixed or replaced the inoperable LRU. (Refer to the MAC.)b. Performed an operational check and updated the maintenance records if fault was corrected.c. If fault could not be corrected at unit level, evacuated the inoperable LRU to a higher maintenance level.d. Completed DA Form 5990-E.	_____	_____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

(O)TM 11-5810-329-23
TM 11-5805-761-13&P
TM 11-5820-1021-23&P

Related

DA PAM 738-750
TM 11-6625-3052-14
TM 11-6625-3199-14

Perform Scheduled Unit Level Maintenance (ULM) on Mobile Subscriber Radiotelephone Terminal (MSRT) AN/VRC-97
113-625-3030

Conditions: Given an MSRT AN/VRC-97, digital nonsecure voice telephone (DNVT) TA-1035/U, digital subscriber voice terminal (DSVT) KY-68, digital multimeter AN/PSM-45(*), DA Form 5986-E, DA Form 5988-E, TM 11-5805-761-13&P, (O)TM 11-5810-329-23, and TM 11-5820-1021-23&P.

Standards: Documented all shortcomings and corrected all deficiencies IAW TM 11-5820-1021-23&P; or evacuated the equipment that had a major deficiency beyond unit maintenance level to a higher maintenance level.

Performance Steps

- 1. Review DA Form 5986-E for scheduled maintenance.
- 2. Collect material required.
- 3. Perform ULM checks and services.
 - a. Verify operator's PMCS.
 - b. Perform routine checks and services.
- 4. Record deficiencies and shortcomings on DA Form 5988-E.
- 5. Take corrective actions.
 - a. Repair the LRU.
 - (1) On site.
 - (2) Request a higher maintenance level.
 - b. Replace or repair the LRU.
 - c. Perform an operational check. (Transmit and receive a message.)
 - d. Schedule next maintenance.

Performance Measures	<u>GO</u>	<u>NO GO</u>
NOTE: Refer to TM 11-5820-1021-23&P, TM 11-5805-761-13&P, and (O)TM 11-5810-329-23 for performance measures 2, 3, and 5.		
1. Reviewed DA Form 5986-E for scheduled maintenance.	_____	_____
2. Collected material required.	_____	_____
3. Performed ULM checks and services. <ul style="list-style-type: none">a. Verified operator's PMCS.b. Performed routine checks and services.	_____	_____
4. Recorded deficiencies and shortcomings on DA Form 5988-E.	_____	_____
5. Took corrective actions. <ul style="list-style-type: none">a. Repaired the LRU.<ul style="list-style-type: none">(1) On site.(2) Requested a higher maintenance level.b. Replaced or repaired the LRU.c. Performed an operational check. (Transmitted and received a message.)d. Scheduled next maintenance.	_____	_____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

(O)TM 11-5810-329-23
TM 11-5805-761-13&P
TM 11-5820-1021-23&P

Related

TM 11-6625-3052-14
TM 11-6625-3199-14

Skill Level 3

Subject Area 2: Commercial-off-the-Shelf (COTS) Computers

Restore Tactical Automated Information Systems

113-580-7002

Conditions: Given a microcomputer (Pentium 166 or better) with one or more induced errors/system faults, UNIX or MS-WINDOWS NT OS/NOS software, user backup archives (tape, disk, or CD-ROM), unit's SOP, and manufacturer's (MFG) reference manuals.

Standards: Corrected all the induced errors and made the system operational.

Performance Steps

1. Determine the type of system failure.
 - a. Power.
 - b. Hardware.
 - c. Software.
2. Perform corrective actions for above types of system failure.
 - a. Power.
 - b. Hardware.
 - c. Software.
3. Perform the FSCK command.
4. Check the LOST+FOUND directory for lost data.
5. Recover lost data if applicable.
6. Recover damaged data from the backup files.
7. Notify the user(s) of possible problems.
8. Report system status to your supervisor.

Performance Measures

	<u>GO</u>	<u>NO GO</u>
1. Determined the type of system failure. <ol style="list-style-type: none"> a. Power. b. Hardware. c. Software. 	—	—
2. Performed corrective actions for above types of system failure. <ol style="list-style-type: none"> a. Power. b. Hardware. c. Software. 	—	—
3. Performed the FSCK command.	—	—
4. Checked the LOST+FOUND directory for lost data.	—	—
5. Recovered lost data (if applicable).	—	—
6. Recovered damaged data from backup files.	—	—
7. Notified user(s) of possible problems.	—	—

Performance Measures

GO **NO GO**

8. Reported system status to your supervisor.

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

MFG MANUALS
UNIT SOP

Related

Direct Implementation of a Tactical Local Area Network (TACLAN)
113-580-7126

Conditions: Given the unit's operation order (OPORD), unit's tactical SOP, unit's SOI, network capable PCs, server software, cables, connectors, hubs, map of the operational area, COTS computer user manuals (CUM), AR 380-5, DA PAM 738-750, FM 24-7, and FM 11-55.

Standards: Installed the TACLAN IAW the unit's OPORD and passed traffic between all users.

Performance Steps

- 1. Review the unit's OPORD.
 - a. Identify the mission of the TACLAN.
 - b. Identify available assets.
 - c. Review the network layout.
 - d. Identify applications to be installed.
 - e. Identify the interface with outside networks.
 - f. Identify IP addresses.
- 2. Install hardware.
 - a. Select location for server and install hardware.
 - b. Select location for hub(s). Ensure they are centrally located for access by all users.
 - c. Instruct users to install hardware at their locations and to run their LAN cables to the hub.
 - d. Install LAN cable from server to communications system responsible for connectivity to other networks.
- 3. Install software.
 - a. Install/configure server software.
 - b. Assign IP addresses for all PCs in the network.
 - c. Assign all users their passwords.
 - d. Send out a test message to all users.
- 4. Manage the network.
 - a. Add/delete users IAW the unit's OPORD.
 - b. Perform backups of server system files.
 - c. Maintain server system files.
 - d. Maintain network security.

Performance Measures

- | | <u>GO</u> | <u>NO GO</u> |
|---|------------------|---------------------|
| 1. Reviewed the unit's OPORD. | _____ | _____ |
| a. Identified the mission of the TACLAN. | | |
| b. Identified available assets. | | |
| c. Reviewed the network layout. | | |
| d. Identified applications. | | |
| e. Identified the interface with outside networks. | | |
| f. Identified IP addresses. | | |
| 2. Installed hardware. | _____ | _____ |
| a. Selected location for the server and installed hardware. | | |
| b. Selected location for the hub(s). Ensured they were centrally located for access by all users. | | |
| c. Instructed users to install hardware at their locations and had them run their LAN cables to the hub. | | |
| d. Installed LAN cable from the server to the communications system responsible for connectivity to other networks. | | |

Performance Measures

GO **NO GO**

3. Installed software.
 - a. Installed/configured server software.
 - b. Assigned IP addresses for all PCs in the network.
 - c. Assigned all users their passwords.
 - d. Sent out a test message to all users.

4. Managed the network
 - a. Added/deleted users IAW the unit's OPORD.
 - b. Performed backups of server system files.
 - c. Maintained server system files.
 - d. Maintained network security.

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

AR 380-5
 COTS CUM
 DA PAM 738-750
 FM 11-55
 FM 24-7
 UNIT OPORD
 UNIT SOI
 UNIT TACTICAL SOP

Related

Subject Area 4: Very High Frequency Radios

Direct Implementation of an FM Voice Data Communications Network
113-587-7133

Conditions: Given the unit's OPORD, unit's SOI, unit's tactical SOP, frequency modulated (FM) radio installation kits, FM radios, COMSEC fill devices, COMSEC devices, extended range antennas, DA PAM 738-750, applicable technical manuals, FM 24-18, and FM 24-33.

Standards: The FM NCS received a radio check from all stations.

Performance Steps

- 1. Review the unit's OPORD
 - a. Identify the mission of the FM net.
 - b. Identify the available assets.
 - c. Identify the transmission plan diagram.
 - d. Identify the locations of the stations within the net.
 - e. Identify the need for radio RETRANS.
- 2. Allocate the resources.
 - a. Ensure users have the required radio equipment to operate in the net.
 - b. Ensure users have the unit's current SOI (manual or electronic).
 - c. Ensure the SOI database (electronic) is modified and verified down to the lowest user.
 - d. Ensure users have the required current COMSEC key.
 - e. Ensure users have the required COMSEC fill device for their radio/COMSEC equipment.
 - f. Ensure RETRANS operators have all equipment/supplies outlined in the unit's tactical SOP.
- 3. Establish the radio net.
 - a. Ensure users conduct a proper PMCS of their assigned equipment.
 - b. Advise the unit commander on the status of the equipment.
 - c. Ensure users are notified of the net start-up time.
 - d. Ensure the net is open.
 - e. Ensure the proper radio procedures are being utilized.
 - f. Ensure radio checks are conducted with all the stations.

Performance Measures

- 1. Reviewed the unit's OPORD.
 - a. Identified the mission of the FM net.
 - b. Identified the available assets.
 - c. Identified the transmission plan diagram.
 - d. Identified the locations of the stations within the net.
 - e. Identified the need for radio RETRANS.
- 2. Allocated the resources.
 - a. Ensured users had the required radio equipment to operate in the net.
 - b. Ensured users had the unit's current SOI (manual or electronic).
 - c. Ensured the SOI database was modified and verified down to the lowest user.
 - d. Ensured users had the required COMSEC fill device for their radio/COMSEC equipment.
 - e. Ensured users had an extended range antenna if required at their location.
 - f. Ensured the RETRANS operators had all the equipment/supplies outlined in the unit's tactical SOP.

GO NO GO

Performance Measures

GO **NO GO**

3. Established the radio net.
 - a. Ensured users conducted a proper PMCS of their assigned equipment.
 - b. Advised the unit commander on the status of the equipment.
 - c. Ensured users were notified of the net start-up time.
 - d. Ensured the net was opened.
 - e. Ensured the proper radio procedures were utilized.
 - f. Ensured that radio checks were conducted with all the stations.

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

DA PAM 738-750
 FM 24-18
 FM 24-33
 UNIT OPORD
 UNIT SOI
 UNIT TACTICAL SOP

Related

EQUIPMENT TM(S)
 FM 11-32

Subject Area 6: Tactical Satellite Equipment

Direct Implementation of a Single-Channel Tactical Satellite Communications Network
113-589-7120

Conditions: Given the unit's OPORD, unit's SOI, unit's tactical SOP, TACSAT communications equipment, COMSEC fill devices, COMSEC devices, applicable technical manuals, DA PAM 738-750, FM 24-11, FM 24-18, and FM 24-33.

Standards: The TACSAT communications NCS received a radio check from all the stations.

Performance Steps

1. Review the unit's OPORD.
 - a. Identify the mission of the TACSAT net.
 - b. Identify the transmission plan diagram.
 - c. Identify the azimuth and elevation of the satellite to be used.
 - d. Identify the available assets, to include compatibility of different TACSAT systems.
 - e. Identify the NCS.
 - f. Identify the locations of the stations within the net.
2. Allocate the resources.
 - a. Ensure users have the required TACSAT equipment to operate in the net.
 - b. Ensure users have the unit's current SOI (manual or electronic) or frequency information to include uplink, downlink, and offset.
 - c. Ensure users have the required current COMSEC key.
 - d. Ensure users have the required COMSEC fill device for their radio/COMSEC device.
 - e. Ensure users have loaded the presets for COMSEC devices.
 - f. Ensure users have the correct configuration and have loaded the terminal.
 - g. Ensure users have the correct azimuth and elevation to be used from their location.
3. Establish the TACSAT net.
 - a. Ensure users conduct a PMCS of their assigned equipment.
 - b. Advise the commander on the status of the equipment.
 - c. Ensure users are notified of the net start-up time.
 - d. Ensure the net is open.
 - e. Ensure the proper radio procedures are being utilized.
 - f. Ensure radio checks are conducted with all the stations.

Performance Measures

	<u>GO</u>	<u>NO GO</u>
1. Reviewed the unit's OPORD.	_____	_____
a. Identified the mission of the TACSAT net.		
b. Identified the transmission plan diagram.		
c. Identified the azimuth and elevation of the satellite to be used.		
d. Identified the available assets, to include compatibility of different TACSAT systems.		
e. Identified the NCS.		
f. Identified the locations of the stations within the net.		
2. Allocated the resources.	_____	_____
a. Ensured users had the required TACSAT equipment to operate in the net.		
b. Ensured users had the unit's current SOI (manual or electronic) or frequency information to include uplink, downlink, and offset.		
c. Ensured users had the required current COMSEC key.		

Performance Measures

GO **NO GO**

- d. Ensured users had the required COMSEC fill device for their radio/COMSEC equipment.
 - e. Ensured all presets were correct in the COMSEC equipment.
 - f. Ensured users had the correct configuration and had loaded the terminal.
 - g. Ensured users had the correct azimuth and elevation to be used from their location.
3. Established the radio net.
- a. Ensured users conducted a proper PMCS of their assigned equipment.
 - b. Advised the unit commander on the status of the equipment.
 - c. Ensured users were notified of the net start-up time.
 - d. Ensured the net was opened.
 - e. Ensured the proper radio procedures were utilized.
 - f. Ensured that radio checks were conducted with all the stations.

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

DA PAM 738-750
EQUIPMENT TM(S)
FM 24-11
FM 24-18
FM 24-33
UNIT OPORD
UNIT SOI
UNIT SOP

Related

DISAC 800-70-1

Subject Area 10: High/Ultra High Frequency Radios

**Direct Implementation of a High Frequency (HF) Communications Network
113-620-7089**

Conditions: Given the unit's OPORD, unit's SOI, unit's tactical SOP, HF equipment, COMSEC fill devices, DA PAM 738-750, applicable technical manuals, FM 11-32, FM 24-18, and FM 24-33.

Standards: Installed the HF communications net IAW the unit's OPORD; and the NCS received radio checks from all the stations.

Performance Steps

1. Review the unit's OPORD.
 - a. Identify the mission of the HF net.
 - b. Identify the transmission plan diagram.
 - c. Identify the available assets.
 - d. Identify the NCS.
 - e. Identify the locations of the stations within the net.
 - f. Identify the need for a RETRANS.
2. Allocate the resources.
 - a. Ensure users have the required equipment to include all necessary antenna sets and have an understanding of which antenna to use in each situation.
 - b. Ensure users have the unit's current SOI (manual or electronic).
 - c. Ensure users have the current required COMSEC key.
 - d. Ensure users have the required COMSEC fill device for their type of radio set.
3. Establish the radio net.
 - a. Ensure users conduct a proper PMCS of their assigned equipment.
 - b. Advise unit commander on the status of the equipment.
 - c. Ensure users are aware of the net start-up time.
 - d. Ensure the net is open.
 - e. Ensure the proper radio procedures are being utilized.
 - f. Ensure radio checks are conducted with all the stations.

Performance Measures

- | | <u>GO</u> | <u>NO GO</u> |
|---|------------------|---------------------|
| 1. Reviewed the unit's OPORD. | — | — |
| a. Identified the mission of the net. | | |
| b. Identified the transmission plan diagram. | | |
| c. Identified the available assets. | | |
| d. Identified the NCS. | | |
| e. Identified the locations of the stations within the net. | | |
| f. Identified the need for a RETRANS. | | |
| 2. Allocated the resources. | — | — |
| a. Ensured users had the required equipment. | | |
| (1) Ensured users had all needed antenna equipment. | | |
| (2) Ensured users knew which antenna to use in each situation. | | |
| b. Ensured users had the unit's current SOI (manual or electronic). | | |
| c. Ensured users had the current required COMSEC key. | | |
| d. Ensured users had the required COMSEC fill device for their type of radio set. | | |
| 3. Established the radio net. | — | — |

Performance Measures

GO NO GO

- a. Ensured users conducted the proper PMCS of their assigned equipment prior to establishing net.
- b. Advised unit commander of the status of all required equipment.
- c. Ensured users were aware of net start-up time.
- d. Ensured the net was opened on time.
- e. Ensured the proper radio procedures were utilized.
- f. Ensured that radio checks were conducted with all the stations.

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

Related

DA PAM 738-750
EQUIPMENT TM(S)
FM 11-32
FM 24-18
FM 24-33
UNIT OPORD
UNIT SOI
UNIT TACTICAL SOP

Subject Area 12: Combat Communications Planning

Select a Radio Site
113-611-1015

Conditions: Given the unit's OPORD; unit's LOI; vehicle with an operational radio system A for ground reconnaissance at your location, an operational radio system B at senior unit's location, and an operational radio system C at the subordinate unit's location; a map of the area, protractor, and lensatic compass.

Standards: Identified selected primary and alternate radio sites for radio system A, passed traffic to radio systems B and C, and the supervisor approved site selection data.

Performance Steps

1. Make a map reconnaissance to determine the requirements.
 - a. Determine the grid coordinates of your unit, your senior unit, your subordinate units, and the enemy.
 - b. Determine the distance between each site.
 - c. Determine antenna requirements.
2. Make a hasty profile diagram of the terrain between the site of your unit and the sites of your senior and subordinate units.
 - a. Determine line of sight (LOS) visibility.
 - b. Plot hidden area or dead spots.
 - c. Conduct preliminary planning of the roads.
3. Make a ground reconnaissance of both primary and alternate site locations for your unit.
 - a. Determine primary and alternate locations for the radio equipment at each site.
 - b. Determine feasibility of the use of the remote equipment.
 - c. Determine antenna LOS.
4. Determine communications operability of the identified sites.
 - a. Set up radio system A.
 - b. Make any necessary adjustments until traffic between all radio systems in the net passes.
5. Analyze terrain features.
 - a. Determine if there are any terrain features that can be used to your unit's advantage.
 - b. Determine if any material cover and/or concealment exists.
 - c. Determine if sites are readily accessible by the primary and alternate access routes.
6. Document results and submit site selection data to the supervisor for approval.

Performance Measures

NOTE: Refer to the unit's OPORD and LOI and a map of the area for all performance measures.

GO NO GO

1. Made a map reconnaissance to determine the requirements.
 - a. Determined the grid coordinates.
 - (1) For your unit.
 - (2) For your senior unit.
 - (3) For your subordinate units.
 - (4) For the general direction of the enemy.
 - b. Determined the distance between each site.
 - c. Determined antenna requirements.

Performance Measures	<u>GO</u>	<u>NO GO</u>
2. Made a hasty profile diagram of the terrain between the site of your unit and the sites of your senior and subordinate units. <ul style="list-style-type: none"> a. Determined LOS visibility. b. Plotted hidden area or dead spots. c. Conducted preliminary planning of the roads. 	—	—
3. Made a ground reconnaissance of both primary and alternate site locations for your unit. <ul style="list-style-type: none"> a. Determined primary and alternate locations for the radio equipment at each site. b. Determined feasibility of the use of remote equipment. c. Determined antenna LOS. 	—	—
4. Determined communications operability of identified sites. <ul style="list-style-type: none"> a. Set up radio system A. b. Made any necessary adjustments until traffic between all radio systems in the net passed. 	—	—
5. Analyzed terrain features. <ul style="list-style-type: none"> a. Determined if there were any terrain features that could be used to your unit's advantage. b. Determined if any material cover and/or concealment existed. c. Determined if sites were readily accessible by the primary and alternate access routes. 	—	—
6. Documented results and submitted site selection data to the supervisor for approval.	—	—

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required
UNIT LOI
UNIT OPORD

Related
FM 21-16
FM 25-100

Subject Area 13: Signal Maintenance Administration

Provide Input to Materiel Condition Status Report
113-615-1002

Conditions: Given AR 700-138; DA PAM 738-750; DA Forms 2404, 2406, 2407, or 5504; and DD Form 314.

Standards: The unit maintenance officer or designated representative approved the input.

Performance Steps

- 1. Identify the information required. (Refer to AR 700-138 and DA Pam 738-750.)
 - a. Identify the not mission capable equipment. (Refer to DD Form 314.)
 - b. Determine the nonavailable days. (Refer to DD Form 314.)
 - c. Determine the reason for delay. (Refer to DA Form 2404 for the not mission capable supply (NMCS) equipment and DA Form 2407 or 5504 for the not mission capable maintenance (NMCM) equipment.
- 2. Document the input.
- 3. Submit the input to the unit maintenance officer or designated representative.

Performance Measures	<u>GO</u>	<u>NO GO</u>
1. Identified the information required. (Refer to AR 700-138 and DA Pam 738-750.) <ul style="list-style-type: none">a. Identified the not mission capable equipment. (Refer to DD Form 314.)b. Determined the nonavailable days. (Refer to DD Form 314.)c. Determined the reason for delay. (Refer to DA Form 2404 for the NMCS equipment and DA Form 2407 or 5504 for the NMCM equipment.	—	—
2. Documented the input.	—	—
3. Submitted the input to the unit maintenance officer or designated representative.	—	—

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References	Related
Required	
AR 700-138	
DA PAM 738-750	

Prepare Unit Level Communications Standard Operating Procedures (SOP)
113-623-7162

Conditions: Given AR 750-1, FM 24-16, and senior unit's communications maintenance (SUCM) SOP.

Standards: Established the SUCM SOP, and the commander approved the procedures to achieve the unit maintenance standards.

Performance Steps

1. Review the SUCM SOP.
 - a. Determine the format and contents. (Refer to FM 24-16.)
 - b. Define responsibilities. (Refer to AR 750-1.)
 - c. Identify maintenance operations. (Refer to AR 750-1.)
 - (1) Performance of PMCS.
 - (2) Inspections by sight and touch of external and other easily accessible components per technical manual 10- and 20-series of the communications equipment.
 - (3) Lubrication, cleaning, preserving (to include spot painting), tightening, replacement, and minor adjustment authorized by the MAC.
 - (4) Diagnosis and fault isolation as authorized by the MAC.
 - (5) Evacuation to the appropriate maintenance support activity of unserviceable repairables beyond MAC authorization to correct/repair.
2. Assemble the SOP. (Refer to FM 24-16.)
3. Submit the SOP to the commander for approval.

Performance Measures

1. Reviewed the SUCM SOP.
 - a. Determined the format and contents. (Refer to FM 24-16.)
 - b. Defined responsibilities. (Refer to AR 750-1.)
 - (1) Supervisory.
 - (2) Operator/crew.
 - c. Identified maintenance operations. (Refer to AR 750-1.)
 - (1) Performance of PMCS.
 - (2) Inspections by sight and touch of external and other easily accessible components per technical manual 10- and 20-series of the communications equipment.
 - (3) Lubrication, cleaning, preserving (to include spot painting), tightening, replacement, and minor adjustment authorized by the MAC.
 - (4) Diagnosis and fault isolation as authorized by the MAC.
 - (5) Evacuation to the appropriate maintenance support activity of unserviceable repairables beyond MAC authorization to correct/repair.
2. Assembled the SOP. (Refer to FM 24-16.)
3. Submitted the SOP to the commander for approval.

GO **NO GO**

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

AR 750-1

FM 24-16

SUCM SOP

Related

Perform Quality Control on Unit Level Maintenance (ULM) of Assigned Signal Equipment
113-623-7196

Conditions: Given an SICPS with associated communications equipment; Excess Management Report; Service Schedule Due Report; PLL Inventory Report; AR 25-30, AR 710-2, DA PAM 738-750, TM 11-7010-256-12&P for the tracked command post (M1068) version, TM 11-7010-258-12&P for the STCP version, TM 11-7010-260-12&P for the RWS version, or the applicable technical manuals for other signal equipment; DA Form 5986-E, and DA Form 5988-E.

Standards: Documented and corrected all discrepancies in ULM documentation and performance procedures; or the equipment without faults passed the self-test.

Performance Steps

1. Obtain and inspect the managers' reports from the ULLS clerk. (Refer to DA PAM 738-750.)
 - a. Inspect the Excess Management Report.
 - b. Inspect the Service Schedule Due Report.
 - c. Inspect the PLL Inventory Report.
2. Check ULM results to verify any discrepancies. (Refer to applicable equipment technical manuals.)
 - a. Inspect the equipment for operator's PMCS.
 - b. Inspect the equipment for ULM checks and services.
3. Take corrective actions. (Refer to AR 25-30, AR 710-2, and DA PAM 738-750.)
 - a. List all the faults noted during the inspection.
 - b. Resolve any training issues.
 - c. Verify corrective actions.
4. Schedule next maintenance inspection.

Performance Measures

	<u>GO</u>	<u>NO GO</u>
1. Obtained and inspected the managers' reports from the ULLS clerk. (Refer to DA PAM 738-750.)	—	—
a. Inspected the Excess Management Report.		
b. Inspected the Service Schedule Due Report.		
c. Inspected the PLL Inventory Report.		
2. Checked ULM results to verify any discrepancies. (Refer to TM 11-7010-256-12&P, TM 11-7010-258-12&P, TM 11-7010-260-12&P, or applicable technical manuals of other signal equipment.)	—	—
a. Inspected the equipment for operator's PMCS.		
b. Inspected the equipment for ULM checks and services.		
3. Took corrective actions. (Refer to AR 25-30, AR 710-2, and DA PAM 738-750.)	—	—
a. Listed all the faults noted during the inspection.		
b. Resolved any training issues.		
c. Verified corrective actions.		
4. Scheduled next maintenance inspection.	—	—

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

AR 25-30
 AR 710-2
 DA PAM 738-750
 EQUIPMENT TM(S)
 TM 11-7010-256-12&P
 TM 11-7010-258-12&P
 TM 11-7010-260-12&P

Related

Skill Level 4

Subject Area 12: Combat Communications Planning

Plan FM Voice and Data Communications Net

113-611-6002

Conditions: Given FM 21-26, FM 24-16, TM 11-5820-890-20-1, TM 11-5820-890-20-2, TM 11-5825-283-23, list of equipment (SINCGARS radio set, AN/CYZ-10, EPLRS radio set AN/VSQ-2(V)2), and unit's SOI, SOP, and operation plan (OPLAN).

Standards: Incorporated the voice and data communications net plan into the OPORD, and the commander approved the plan.

Performance Steps

1. Identify mission requirements of the FM voice and data communications net.
 - a. Review the OPLAN.
 - b. Review the assets.
2. Formulate signal estimate.
 - a. Develop the transmission plan diagram.
 - b. Identify the sustainment requirements.
3. Planning considerations.
 - a. Terrain.
 - b. Weather.
 - c. Type of unit.
 - d. Number of units.
 - e. Availability of COMSEC devices.
 - f. Restricted frequencies.
 - g. Antenna requirements.
 - h. Power requirements.
 - i. Electronic warfare (EW) threats.
4. Submit the plan for approval.
 - a. Brigade or battalion signal officer.
 - b. Training operations S3.
5. Incorporate the approved plan into the OPORD.

Performance Measures

	<u>GO</u>	<u>NO GO</u>
1. Identified mission requirements of the FM voice and data communications net.	—	—
a. Reviewed the OPLAN.		
b. Reviewed the assets.		
2. Formulated signal estimate.	—	—
a. Developed the transmission plan diagram.		
b. Identified the sustainment requirements.		
3. Planned considerations.	—	—
a. Terrain.		
b. Weather.		
c. Type of units.		
d. Number of units.		
e. Availability of COMSEC devices.		

Performance Measures	<u>GO</u>	<u>NO GO</u>
f. Restricted frequencies.		
g. Antenna requirements.		
h. Power requirements.		
i. EW threats.		
4. Submitted the plan for approval.	_____	_____
a. Brigade or battalion signal officer.		
b. Training operations S3.		
5. Incorporated the approved plans into the OPORD.	_____	_____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References	
Required	Related
FM 21-26	FM 24-22
FM 24-16	
TM 11-5820-890-20-1	
TM 11-5820-890-20-2	
TM 11-5825-283-23	
UNIT OPLAN	
UNIT SOI	
UNIT SOP	

**Plan a Tactical Local Area Network (LAN)/Wide Area Network (WAN) for Brigade and Below
113-611-6003**

Conditions: Given the unit's OPLAN and SOP; a map of the operational area; protractor; AR-380-5, AR 700-138, FM 21-26, FM 24-18, FM 101-5-1, and TB 380-41.

Standards: Incorporated the plan for the LAN/WAN into the OPORD, and the commander approved the plan.

Performance Steps

1. Identify mission requirements of the tactical WAN.
 - a. Review the OPLAN.
 - b. Review the assets.
 - c. Review the map of the operational area.
2. Formulate signal estimate.
 - a. Identify the network diagram.
 - b. Identify the sustainment requirements.
3. Select the WAN.
 - a. Review the alternatives in utilizing the best route for running the WAN.
 - b. Select one of the alternatives.
4. Procurement or availability of the equipment to implement the WAN.
 - a. Wiring.
 - b. Connectivity devices.
 - c. Workstations.
 - d. Servers.
 - e. Software.
5. Submit the plan for approval.
 - a. Brigade or battalion signal officer.
 - b. Training operations S3.
7. Incorporate the approved plan into the OPORD.

Performance Measures

	<u>GO</u>	<u>NO GO</u>
1. Identified mission requirements of the tactical WAN.	—	—
a. Reviewed the OPLAN.		
b. Reviewed the assets.		
c. Reviewed the map of the operational area.		
2. Formulated signal estimate.	—	—
a. Identified the diagram network.		
b. Identified the sustainment requirements.		
3. Selected the WAN.	—	—
a. Reviewed the alternatives in utilizing the best route for running the WAN.		
b. Selected one of the alternatives.		
4. Procurement or availability of the equipment to implement the WAN.	—	—
a. Wiring.		
b. Connectivity devices.		
c. Workstations.		

Performance Measures	<u>GO</u>	<u>NO GO</u>
d. Servers.		
e. Software.		
5. Submitted the plan for approval.	_____	_____
a. Brigade or battalion signal officer.		
b. Training operations S3.		
6. Incorporated the approved plans into the OPORD.	_____	_____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

AR 380-5
 AR 700-138
 FM 101-5-1
 FM 21-26
 FM 24-18
 TB 380-41
 UNIT OPLAN
 UNIT SOP

Related

Plan a Single-Channel Tactical Satellite Communications Network

113-611-6004

Conditions: Given the unit's OPLAN and SOP; list of TACSAT communications equipment; DA PAM 738-750; FM 11-24, FM 24-16, and FM 24-22; TM 11-5896-1181-20, TM 11-5895-1180-20, and TM 11-5895-1488-10; and the AN/CYZ-10.

Standards: The commander approved the OPORD.

Performance Steps

1. Review the unit's SOP and SOI to determine specific TACSAT communications requirements.
 - a. Determine the net requirements.
 - b. Determine the locations of the communication sites as required.
2. Review the equipment list to determine the assets available to support the mission.
3. Determine the logistical support required to install and maintain the TACSAT communications network.
 - a. Type of unit.
 - b. Number of units.
 - c. Availability of COMSEC devices.
 - d. Restricted frequencies.
 - e. Antenna requirements.
 - f. Power requirements.
4. Review equipment capabilities.
5. Submit the plan for approval.
 - a. Brigade or battalion signal officer.
 - b. S3 operations.
6. Incorporate the approved plan into the OPORD.

Performance Measures

	<u>GO</u>	<u>NO GO</u>
1. Reviewed the unit's SOP and SOI to determine specific TACSAT communications requirements.	—	—
a. Determined the net requirements.		
b. Determined the locations of the communication sites as required.		
2. Reviewed the equipment list to determine the assets available to support the mission.	—	—
3. Determined the logistical support required to install and maintain the TACSAT communications network.	—	—
a. Type of unit.		
b. Number of units.		
c. Availability of COMSEC devices.		
d. Restricted frequencies.		
e. Antenna requirements.		
f. Power requirements.		
4. Reviewed equipment capabilities.	—	—
5. Submitted the plan for approval.	—	—
a. Brigade or battalion signal officer.		
b. S3 operations.		

Performance Measures

GO **NO GO**

6. Incorporated the approved plan into the OPORD.

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

DA PAM 738-750

FM 11-24

FM 24-16

FM 24-22

TM 11-5895-1180-20

TM 11-5895-1181-20

UNIT OPLAN

UNIT SOI

UNIT SOP

Related

FM 21-26

Plan an HF Communications Network
113-611-6005

Conditions: Given the unit's OPORD/OPLAN, SOP, and SOI; the AN/CYZ-10; FM 11 -65, FM 24-16, and FM 24-18.

Standards: Prepared and completed the HF communications network plan, and the commander approved the plan.

Performance Steps

1. Review the unit's current SOP and SOI to determine specific HF requirements.
 - a. Determine the net requirements.
 - b. Determine the locations of the communications sites as required.
2. Review the equipment and troop list to determine the assets available to support the mission.
3. Determine the logistical support required to install and maintain the HF communications system.
4. Review equipment capabilities.
5. Review the time permitted for installation, type of terrain, and expected weather conditions under which the system will operate.
6. Determine propagation mode(s).
 - a. Ground wave.
 - b. Skywave.
7. Request engineering support as required.
 - a. Propagation prediction.
 - b. Antenna sighting and orientation.
 - c. Frequency.

NOTE: The planner may be required to do part or all of the systems engineering, utilizing the appropriate ground wave propagation chart and/or the intermediate and short-distance skywave propagation charts. Coordinate with the frequency management section on the frequency selection.

8. Determine the network layout as required.
9. Assign the NCS as required.
10. Assign frequencies and time periods for operations.
11. Prepare the radio net diagram.
12. Submit the plan for approval to battalion S3.

Performance Measures

	<u>GO</u>	<u>NO GO</u>
1. Reviewed the unit's current SOP and SOI to determine specific HF requirements. <ol style="list-style-type: none"> a. Determined the net requirements. b. Determined the locations of the communications sites as required. 	—	—
2. Reviewed the equipment and troop list to determine the assets available to support the mission.	—	—
3. Determined the logistical support required to install and maintain the HF communications system.	—	—
4. Reviewed equipment capabilities.	—	—

Performance Measures	<u>GO</u>	<u>NO GO</u>
5. Reviewed the time permitted for installation, type of terrain, and expected weather conditions under which the system operated.	—	—
6. Determined propagation mode(s). a. Ground wave. b. Skywave.	—	—
7. Requested engineering support as required. a. Propagation prediction. b. Antenna siting and orientation. c. Frequency.	—	—
8. Determined the network layout as required.	—	—
9. Assigned the NCS as required.	—	—
10. Assigned frequencies and time periods for operations.	—	—
11. Prepared the radio net diagram.	—	—
12. Submitted the plan for approval to battalion S3.	—	—

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

FM 11-65
FM 24-16
FM 24-18
UNIT OPLAN
UNIT OPORD
UNIT SOI
UNIT SOP

Related

Prepare Input to Signal Annex (Paragraph 5) of the OPORD
113-611-6112

Conditions: Given an incomplete OPORD, FM 24-16, FM 105-5, unit's SOI, mission statement, and a map of the operational area.

Standards: Prepared the input to the Signal Annex (paragraph 5), identified the battalion's communications-electronics responsibility to the mission, and the supervisor approved the input information.

Performance Steps

1. Review supporting documents.
 - a. Determine the mission.
 - b. Determine the communications-electronics responsibility to the mission. (Review the unit's OPORD.)
2. Prepare input for the applicable portion of the unit's SOI to be in effect. Prepare any special instructions relating to signal matters.
3. List the locations of the command posts (CPs).
 - a. List CP location for the issuing unit.
 - b. List CP locations for subordinate units.
 - c. List CP location for the command group.
4. Determine if information on future locations of major headquarters is needed. List all future signal system planning and location requirements as necessary.
5. Analyze the mission as it pertains to the communications-electronics responsibility.
 - a. Ensure all input information to the communications-electronics of the Signal Annex is listed.
 - b. Identify the communications-electronics responsibility to the mission.
6. Submit input information for supervisor's approval.

Performance Measures

NOTE: Refer to FM 101-5, FM 24-16, unit's SOI, and mission statement for performance measures 1 through 5.

	<u>GO</u>	<u>NO GO</u>
1. Reviewed supporting documents. <ol style="list-style-type: none"> a. Determined the mission. b. Determined the communications-electronics responsibility to the mission. (Reviewed the unit's OPORD.) 	_____	_____
2. Prepared input for the applicable portion of the unit's SOI to be in effect. Prepared any special instructions relating to signal matters.	_____	_____
NOTE: For performance measures 3 through 5, refer to the map.		
3. Listed the locations of the CPs. <ol style="list-style-type: none"> a. Listed CP location for the issuing unit. b. Listed CP locations for subordinate units. c. Listed CP location for the command group. 	_____	_____
4. Determined if information on future locations of major headquarters was needed. Listed all future signal system planning and location requirements as necessary.	_____	_____
5. Analyzed the mission as it pertained to the communications-electronics responsibility.	_____	_____

Performance Measures

GO **NO GO**

- | | |
|---|---------------------------|
| <ul style="list-style-type: none"> a. Ensured all input information to the communications-electronics of the Signal Annex was listed. b. Identified the communications-electronics responsibility to the mission. | <p>_____</p> <p>_____</p> |
|---|---------------------------|
6. Submitted input information for supervisor's approval. _____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References

Required

FM 101-5
FM 24-16
UNIT SOI

Related

Subject Area 14: Signal Support Plans and Operations

Prepare Input to Signal Operation Instructions (SOI) Using Revised Battlefield Electronics CEOI Systems (RBECS) or Equivalent**113-573-8010**

Conditions: Given an IBM or compatible computer with RBECS software, floppy disk, authorized frequency list, unit's METL to determine equipment and SOI requirements, AR 380-5, FM 24-35, and FM 24-35-1.

Standards: Created, compiled, and approved, by higher headquarter, the SOI initiation date.

Performance Steps

1. Review the unit's METL. (Refer to AR 380-5, FM 24-35, and FM 25-35-1.)
 - a. Identify the assets.
 - b. Identify the number of radio networks required.
2. Diagram Signal support requirements.
 - a. Outline organizational net list data.
 - b. Create call word data.
 - c. Designate group net data.
 - d. Create call signs data.
 - e. Create suffixes and expanders data.
 - f. Create sign/countersigns data.
 - g. Create smoke/pyrotechnics data.
 - h. Create net identifier data.
 - i. Create frequency list. (Refer to the authorized frequency list.)
3. Submit SOI initiation input on floppy disk to higher headquarters for approval.
 - a. Verify initiation data using the METL.
 - b. Correct any discrepancies noted by higher headquarters.

Performance Measures

- | | <u>GO</u> | <u>NO GO</u> |
|---|------------------|---------------------|
| 1. Reviewed the unit's METL. (Refer to AR 380-5, FM 24-35, and FM 24-35-1.) | — | — |
| a. Identified the assets. | | |
| b. Identified the number of radio networks required. | | |
| 2. Diagrammed Signal support requirements. | — | — |
| a. Outlined organizational net list data. | | |
| b. Created call word data. | | |
| c. Designated group net data. | | |
| d. Created call signs data. | | |
| e. Created suffixes and expanders data. | | |
| f. Created sign/countersigns data. | | |
| g. Created smoke/pyrotechnics data. | | |
| h. Created net identifier data. | | |
| i. Created frequency list. (Refer to the authorized frequency list.) | | |
| 3. Submitted SOI initiation input on floppy disk to higher headquarters for approval. | — | — |
| a. Verified initiation data using the METL. | | |
| b. Corrected any discrepancies noted by higher headquarters. | | |

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References**Required**

AR 380-5
FM 24-35
FM 24-35-1

Related

TM 11-7010-263-13&P-2

Operate Revised Battlefield Electronic CEOI Systems (RBECS) or Equivalent Software
113-609-2054

Conditions: Given an IBM or compatible 486 computer or better, 512 executable random-access memory (RAM), with RBECS software loaded or diskettes with RBECS software, TM 11-7010-263-13&P, TM 11-7010-263-13&P-2, and TM 11-7010-263-13&P-3.

Standards: Successfully developed, generated, and transferred the RBECS software to an external device.

Performance Steps

1. Review the unit's METL.
 - a. Identify the assets.
 - b. Identify the number of radio networks required.
2. Diagram Signal support requirements.
 - a. Develop the master net list.
 - b. Develop the Joint Communications-Electronics Operation Instructions (JCEOI)/SOI net groups.
 - c. Develop the radio frequency allocation process.
 - d. Enter the radio frequency allocation.
 - e. Develop the frequency restrictions.
 - f. Develop the frequency reuse plan.
 - g. Develop a separation (cosite/special nets) plan.
 - h. Develop call sign/call word/frequency share groups.
 - i. Develop the JCEOI/SOI suffix and expander dictionaries.
 - j. Develop sign/countersign, smoke, and pyrotechnics.
 - k. Develop the JCEOI/SOI title, index, and quick reference page.
 - l. Generate the JCEOI/SOI.
 - m. Edit/print the RBECS JCEOI/SOI generated data.
 - n. Transport/export the RBECS JCEOI/SOI data.

Performance Measures

	<u>GO</u>	<u>NO GO</u>
1. Reviewed the unit's METL.	_____	_____
a. Identified the assets.		
b. Identified the number of radio networks required.		
2. Diagrammed Signal support requirements.	_____	_____
a. Developed the master net list.		
b. Developed the JCEOI/SOI net groups.		
c. Developed the radio frequency allocation process.		
d. Entered the radio frequency allocation.		
e. Developed the frequency restrictions.		
f. Developed the frequency reuse plan.		
g. Developed a separation (cosite/special nets) plan.		
h. Developed call sign/call word/frequency share groups.		
i. Developed the JCEOI/SOI suffix and expander dictionaries.		
j. Developed sign/countersign, smoke, and pyrotechnics.		
k. Developed the JCEOI/SOI title, index, and quick reference page.		
l. Generated the JCEOI/SOI.		
m. Edited/printed the RBECS JCEOI/SOI generated data.		
n. Transported/exported the RBECS JCEOI/SOI data.		

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References**Required**

TM 11-7010-263-13&P-1

TM 11-7010-263-13&P-2

TM 11-7010-263-13&P-3

Related

Conduct Operational Readiness Inspection of Assigned Signal Equipment
113-623-4006

Conditions: Given an SICPS (or other signal equipment) with a completed DA Form 5986-E, a completed DA Form 5988-E, TM 11-7010-256-12&P for the tracked command post (M1068) version, TM 11-7010-258-12&P for the STCP version, TM 11-7010-260-12&P for the RWS version (or applicable technical manuals of other signal equipment), and a completed DA Form 5990-E.

Standards: The equipment successfully passed the operational tests.

Performance Steps

1. Coordinate with the training officer/NCO to schedule the maintenance inspection of signal equipment.
2. Inspect the maintenance records.
 - a. Ensure all maintenance records are correctly completed.
 - b. Ensure all required publications are on hand.
 - c. Ensure uncorrected faults are annotated.
 - d. Document the findings.
3. Inspect the SICPS (or other signal equipment). (Refer to applicable technical manuals.)
 - a. Ensure all services are completed.
 - b. Check the cleanliness of the equipment.
 - c. Check operator's PMCS for completion.
 - d. Document the findings.
4. Perform equipment operational tests. (Refer to applicable equipment technical manuals.)
5. Submit the command summary of the inspection result.

Performance Measures

	<u>GO</u>	<u>NO GO</u>
1. Coordinated with the training officer/NCO to schedule the maintenance inspection of signal equipment.	—	—
2. Inspected the maintenance records. <ol style="list-style-type: none"> a. Ensured all maintenance records were correctly completed. b. Ensured all required publications were on hand. c. Ensured uncorrected faults were annotated. d. Documented the findings. 	—	—
3. Inspected the SICPS (or other signal equipment). (Refer to TM 11-7010-256-12&P, TM 11-7010-258-12&P, TM 11-7010-260-12&P, or applicable technical manuals of other signal equipment.) <ol style="list-style-type: none"> a. Ensured all services were completed. b. Checked the cleanliness of the equipment. c. Checked operator's PMCS for completion. d. Documented the findings. 	—	—
4. Performed equipment operational tests. (Refer to TM 11-7010-256-12&P, TM 11-7010-258-12&P, TM 11-7010-260-12&P, or applicable technical manuals of other signal equipment.)	—	—
5. Submitted the command summary of the inspection result.	—	—

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO GO if any step is failed. If the soldier fails any step, show what was done wrong and how to do it correctly. Have the soldier practice until he can correctly perform the task.

References**Required**

EQUIPMENT TM(S)
TM 11-7010-256-12&P
TM 11-7010-258-12&P
TM 11-7010-260-12&P

Related

AR 750-1
DA PAM 738-750

APPENDIX A - DA FORM 5164-R (HANDS-ON EVALUATION)**A-1. Introduction.**

The DA Form 5164-R (Hands-On Evaluation) allows the trainer to keep a record of the performance measures a soldier passes or fails on each task. Instructions for using this form follow.

A-2. Prior to evaluating the soldier.

- a. Obtain a blank copy of DA Form 5164-R, which you may locally reproduce on 8 1/2- by 11-inch paper.
- b. Enter the task title and 10-digit number for the task from the evaluation guide of the soldier's manual task summary.
- c. In column a, enter the number of each performance measure from the evaluation guide.
- d. In column b, enter the performance measure corresponding to the performance measure number in column a. (You may abbreviate this information if necessary.)
- e. Enter the feedback statement from the evaluation guide just below the last performance measure.
- f. Locally reproduce the partially completed form if you are evaluating more than one soldier on the task or the same soldier on more than one task.

A-3. During the evaluation.

- a. Enter the date just before evaluating the soldier's task performance.
- b. Enter the evaluator's name and the soldier's name and unit.
- c. For each performance measure, column b, enter a check in column c (*PASS*) or column d (*FAIL*), as appropriate.
- d. Compare the number of performance measures the soldier passes (and if applicable, which ones) against the task standard shown in the Feedback statement. If the standard is met or exceeded, check the *GO* block under *STATUS*; otherwise check the *NO-GO* block.

Figure A-1 is a sample of a completed DA Form 5164-R.

HANDS-ON EVALUATION		DATE	
For use of this form, see AR 350-37. The proponent agency is DCSOPS.		14 MAY 2001	
TASK TITLE PERFORM ULM ON A DESKTOP IBM OR COMPATIBLE MICROCOMPUTER		TASK NUMBER 113-580-3069	
ITEM a	PERFORMANCE STEP b	SCORE (Check One)	
		PASS c	FAIL d
1	COLLECTED ALL REQUIRED MATERIAL	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
2	INITIATED MAINTENANCE FORMS	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
3	MAINTAINED PERIPHERAL DEVICES	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
4	MAINTAINED THE CPU	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
5	MAINTAINED HARD DISK DRIVE	<input type="checkbox"/> P	<input checked="" type="checkbox"/> F
6	COMPLETED APPROPRIATE DOCUMENTATION	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
EVALUATOR'S NAME SFC MACKEY		UNIT A CO 369TH	
SOLDIER'S NAME SPC ANDERSON		STATUS <input type="checkbox"/> GO <input checked="" type="checkbox"/> NO GO	

DA FORM 5164-R, SEP85 (EDITION OF 82 TO BE USED)

Figure A-1. Sample of a Completed DA Form 5164-R

APPENDIX B - DA FORM 5165-R (FIELD EXPEDIENT SQUAD BOOK)**B-1. Introduction.**

The DA Form 5165-R (Field Expedient Squad Book) allows the trainer to keep a record of task proficiency for a group of soldiers. Instructions for using this form follow.

B-2. Prior to evaluating the soldier.

- a. Obtain a blank copy of DA Form 5165-R, which you may locally reproduce on 8 1/2- by 11-inch paper.
- b. Enter the SM task number and abbreviated task title for the evaluated tasks in the appropriate column. Use additional sheets as necessary.
- c. Locally reproduce the partially completed form if you are evaluating more than nine soldiers.

B-3. During the evaluation.

- a. Enter the names of the soldiers you are evaluating, one name per column, at the top of the form. You may add the names of newly assigned soldiers if there are blank columns.
- b. Under STATUS, record (*in pencil*) the date in the GO block if the soldier demonstrated task proficiency to soldier's manual standards. Keep this information current by always recording the most recent date on which the soldier demonstrated task proficiency. Record the date in the NO GO block if the soldier failed to demonstrate task proficiency to soldier's manual standards. Soldiers who failed to perform the task should be retrained and re-evaluated until they can meet the standards. When that occurs, enter the date in the appropriate GO block and erase the previous entry from the NO GO block.

B-4. After the evaluation.

- a. Read down each column (GO/NO GO) to determine the training status of that individual. This will give you a quick indication on which tasks a soldier needs training.
- b. Read across the rows for each task to determine the training status of all soldiers. You can readily see on which tasks to focus training.
- c. Line through the training status column of any soldier who departs from the unit.

Figure B-1 is a sample of a completed DA Form 5165-R.

FIELD EXPEDIENT SQUAD BOOK										SHEET 1 OF 2		
For use of this form see AR 360-37. The proponent agency is DCSOPS.												
USER APPLICATION STP 11-31U14 SIGNAL SUPPORT SYSTEMS SPECIALIST		SOLDIER'S NAME										
		MICHAEL	COOPER	ESSEY	L. SMITH	FRUIT						
TASK NUMBER AND SHORT TITLE	STATUS		STATUS		STATUS		STATUS		STATUS		STATUS	
	DD	NO DD	DD	NO DD	DD	NO DD	DD	NO DD	DD	NO DD	DD	NO DD
113-000-0003 TROUSHT A TAGLAN CABLE	DD		DD		DD		DD		DD		DD	
113-000-0004 SYS TROUSHT RADIO AMVIC-4 27	DD		DD		DD		DD		DD		DD	
113-000-0005 INSTALL MULTIPLEXER TO 480VAC	DD		DD		DD		DD		DD		DD	
113-000-0006 MAINTAIN SECURE AMVIC-4 RETRANS	DD		DD		DD		DD		DD		DD	
113-000-0007 MAINTAIN SECURE AMVIC-4 RETRANS												
113-000-0008 INSTALL SECURE AMVIC-7												
113-000-0009 MAINTAIN SECURE TACSAT RETRANS												
113-000-0010 INSTALL ATCOS CHS												
113-000-0011 TROUSHT MCS												
113-000-0012 PERFORM SCHEDULED ULM ON MCS												
113-000-0013 TROUSHT SOPS CHS												
113-000-0014 TROUSHT FLOR												

DA FORM 1165-R, SEP 86 (SECTION OF R1 TO BE USED)

Figure B-2. Sample of a Completed DA Form 5165-R

GLOSSARY

Section I **Abbreviations**

(O)	FOR OFFICIAL USE ONLY
(V)	version
AC	alternating current/Active Component/assistant commandant
ACCP	Army Correspondence Course Program
AIT	Advanced Individual Training
AN	annually (frequency code)
ANCD	automated net control device
ANCOC	Advanced Noncommissioned Officer Course
AR	Army Regulation/Army Reserve
ASI	Additional Skill Identifier; alarm status indicator
ASUM	Applications Software User's Manual
ATTN/attn	attention
BA	biannually (frequency code)
BAT/BATT	battery
BFACS	Battlefield Functional Area Control System
BIT	built-in test
BM	bimonthly (frequency code)
BNCOC	Basic Noncommissioned Officer Course
BW	biweekly (frequency code)
CDRL	Contract Data Requirements List
CECOMM	Cincinnati Electronics Corporation Operation and Maintenance Manual
CEOI	Communications-Electronics Operating Instructions
CHKDSK	MS-DOS command to check the status of a disk
CHS	common hardware/software
CIK	crypto ignition key

COMSEC	communications security
COTS	commercial-off-the-shelf
CP	Command Post
CPU	central processing unit
CUM	Computer User's Manual
DA	Department of the Army; distribution amplifier
DA Form	Department of the Army Form
DA PAM	Department of the Army Pamphlet
DAMA	Demand Assigned Multiple Access
DC	direct current; District of Columbia; Dental Corps
DD Form	Department of Defense Form
DNVT	digital nonsecure voice telephone
DOS	disk operating system
DSVT	digital subscriber voice terminal
EPLRS	Enhanced Position Location Reporting System
ERF	electronically-remote-fill
ESD	electrostatic discharge; electronic sensitive device
EW	electronic warfare
F	Fahrenheit; fail
FBCB2	Force XXI Battle Command Brigade and Below
FCTN	function
FH	frequency hopping
FHMUX	frequency hopping multiplexer
FM	field manual; frequency modulation; file maintenance
FREQ	frequency
GA	Georgia
HF	high frequency

http	hyper text transfer protocol
IBM	International Business Machines Corporation
ICOM	integrated communications
IHFR	improved high frequency radio
INST	institution training
IP	Internet protocol; implementation procedures
ISA	International Standardization Agreement
JCEOI	Joint Communications-Electronics Operation Instructions
LAN	local area network
LCU	lightweight computer unit
LDF	lightweight digital facsimile
LOI	letter of instruction
LOS	line of sight
LRA	local reproduction authorized
LRU	lowest repairable unit
M&D	maintenance and diagnostics
MAC	Maintenance Allocation Chart
METL	mission essential task list
MFG	manufacturer
MO	monthly (frequency code)
MOM	Manufacture's Operation Manual
MOPP	mission oriented protection/protective positive
MOS	Military Occupational Specialty
MOSC	military occupational specialty code
MSAV	Microsoft anti-virus
MS-DOS	Microsoft-Disk Operating System
MSE	mobile subscriber equipment

MSRT	mobile subscriber radiotelephone terminal; An/VCR-97 consisting of RT-1539 and KY-69 DSVT
MTP	Mission Training Plan; MOS Training Plan
NA	not applicable
NBCRS	nuclear-biological-chemical reconnaissance system
NCIM	Network Card Installation Manual
NCO	noncommissioned officer
NCS	net control station
NHUM	Network Hardware User's Manual
NMCM	not-mission-capable maintenance
NMCS	not-mission-capable supply
No./no.	number
NSUM	Network Software User's Manual
OPCODE	operations code
OPLAN	operation plan
OPORD	operation order
OPR	operate; operator; office of primary responsibility
OS	operating system
P	pass
PC	programmable controller; personal computer
PCI	peripheral component interconnect
PCIU	programmable communications interface unit
PLGR	Precision Lightweight Global Positioning System Receiver
PLL	prescribed load list
PMCS	preventive maintenance checks and services
PUM	Printer User's Manual
QT	quarterly (frequency code)
RAM	random access memory

RBECS	Revised Battlefield Electronics CEOI System
RETRANS	retransmission station
RT	receiver-transmitter/remote terminal
RWS	rigid wall shelter
RXMT	retransmit
S3	Operations and Training Officer (U.S. Army)
SA	situational awareness; semiannually (frequency code)
SATCOM	satellite communication(s)
SCAMP	Single-Channel Anti-Jam Man Portable
SCANDISK	MS-DOS command used to clean up lost clusters and chains on a disk
SICPS	Standardized Integrated Command Post System
SINCGARS	Single-Channel Ground and Airborne Radio System
SL	skill level
SM	soldier's manual
SMC	Sergeant's Major Course
SMCT	Soldier's Manual of Common Tasks
SOI	signal operation instructions
SOP	standing operating procedure
STCP	soft-top command post
STP	soldier training publication
SUCM	Senior Unit's Communications Maintenance
Sust	sustainment
TACLAN	tactical local area network
TACSAT	tactical satellite
TACSATCOM	tactical satellite communications
TB	technical bulletin
TEC	Training Extension Course
TG	trainer's guide

TI	test instrument; technical inspection; Tactical Internet
TK	tool kit
TM	technical manual
TMDE	test, measurement, and diagnostic equipment
TNG/Tng	training
TRADOC	Training and Doctrine Command
UHF	ultra high frequency
ULLS	Unit Level Logistics System
ULM	unit level maintenance
UNIT	brevity code for "trained in the unit"
URN	unit requirement number
URO	user readout
US	United States
VA	Virginia
VAA	vehicular amplifier adaptor
VHF	very high frequency
WAN	Wide Area Network
WK	weekly (frequency code)
WUM	WINDOWS User's Manual
WWW	World Wide Web

Section II

Terms

additional skill identifier (ASI)

Identification of specialized skills that are closely related to and are in addition to those required by MOS or specialty skill identifier (SSI). Specialized skills identified by the ASI include operation and maintenance of specific weapons systems and equipment, administrative-type systems and subsystems, computer programming languages, procedures, installation management, analytic methods, animal handling techniques, and similar required skills that are too restricted in scope to comprise an MOS or SSI.

Army Training and Evaluation Program (ARTEP)

The US Army's collective training program. The ARTEP establishes unit training objectives critical to unit survival and performance in combat. They combine the training and the evaluation processes into one integrated function. The ARTEP is a training program and not a test. The sole purpose of external evaluation under this program is to diagnose unit requirements for future training.

collective training

Training in units to prepare cohesive teams and units to accomplish their combined arms and services missions on the integrated battlefield.

common task

A critical task for which all soldiers at a given skill level are accountable, regardless of their MOS.

critical task

A task which is essential for accomplishment of the unit mission, successful individual skill performance and/or survival in battle, and requires training.

Drill

A disciplined, repetitious exercise to teach and perfect a skill or procedure. Drills are linked to Mission Training Plans in that they are a method for executing a collective task or task step. There are two types: Battle Drill--A collective action executed in a standard manner throughout the Army by a platoon or smaller element without the application of a deliberate decision-making process. The action is vital to success in combat or critical to preserving life. The drill is initiated on a cue, such as an enemy action or simple leader's order, and is a trained response to the given stimulus. It requires minimal leader orders to accomplish and is standard throughout like units in the Army. Crew Drill--A collective action that a crew of a weapon or piece of equipment must perform to use the weapon or equipment successfully in combat or to preserve life. This action is a trained response to a given stimulus such as a simple leader order or the status of the weapon or equipment. It requires minimal leader orders to accomplish and is standard throughout the Army.

duty position

The job a service member performs within the unit. AR 611-201 has names of official duty positions for each MOS.

individual training

Training which the officer, NCO, or soldier receives in the training base, units, on the job, or by self-study. This training prepares the individual to perform specified duties or tasks related to the assigned or next higher specialty code of MOS skill level and duty position.

Individual Training Evaluation Program (ITEP)

A program which requires commanders to routinely evaluate soldier's ability to perform nonspecific tasks critical to the unit mission.

integration training

The completion of initial entry training in skill level 1 tasks for an individual newly arrived in a unit, but limited specifically to tasks associated with the mission, organization, and equipment of the unit to which the individual is assigned. It may be conducted by the unit using training materials supplied by TRADOC, by troop schools, or by in-service or contract mobile training teams. In all cases, this training is supported by the TRADOC school proponent.

merger training

Training that prepares an NCO to supervise one or more different MOSs at lower skill levels when the soldier advances in the skill level in his career management field.

military occupational specialty (MOS)

The grouping of duty positions requiring similar qualifications and the performance of closely related duties.

MOS training plan (MTP)

The MTP is a guide for the conduct of individual training in units. An MTP is developed for each MOS and addresses all skill levels of an MOS and all duty positions. The MTP lists all MOS-specific and shared critical tasks for which the MOS is responsible. It will not include common tasks.

performance measures (PM)

Those behavior or product characteristics which the trainer observes/checks to determine if the soldier has performed the task correctly.

self-development

A planned, progressive, and sequential program followed by leaders to enhance and sustain their military competencies. Self-development consists of individual study, research, professional reading, practice, and self-assessment.

shared task

A critical task performed by soldiers from two or more MOSs.

skill level (SL)

A number which denotes the level of qualification within the total MOS. Levels of qualification are identified by characters 0 through 5 in the position of the MOS code.

special qualifications identifiers (SQI)

(warrant officers and enlisted personnel only) an identification of skills in addition to those of an MOS to identify special requirements of certain positions and special qualifications of personnel who are capable of filling such positions. SQIs are authorized for use with any MOS unless otherwise specified.

task summary (TS)

A statement of the task in an action-verb format plus all essential performance measures. A standard format fully describes the task for the soldier in the field. It will accommodate any product or process task whether it is in fixed sequence, alternate sequence, or combination. The task summary is used both to train the soldier to perform the task and to evaluate the soldier's ability to perform the task (within testing constraints).

training objective

A statement that describes the desired outcome of a training activity in the unit. It consists of the following three parts: task, condition(s), and standards.

train-up

The process of increasing the skills and knowledge of an individual to a higher skill level in the appropriate MOS. (It may involve certification.)

unit training

Training (individual, collective, and joint or combined) conducted in the unit.

REFERENCES

Required Publications

Required publications are sources that users must read in order to understand or to comply with this publication.

Army Regulations

AR 25-30	The Army Publishing and Printing Program. 21 June 1999
AR 380-5	Department of the Army Information Security Program. 29 September 2000
AR 700-138	Army Logistics Readiness and Sustainability. 16 September 1997
AR 710-2	Inventory Management Supply Policy Below the Wholesale Level. 31 October 1997
AR 750-1	Army Materiel Maintenance Policy and Retail Maintenance Operations. 1 August 1994

Department of Army Forms

DA FORM 2404	Equipment Inspection and Maintenance Worksheet. 1 April 1979
DA FORM 2406	Materiel Condition Status Report. 1 April 1993
DA FORM 2407	Maintenance Request. 7 July 1994
DA FORM 5504	Maintenance Request. September 1988
DA FORM 5986-E	Preventive Maintenance Scheduled and Records. 1 March 1991
DA FORM 5988-E	Equipment Inspection Worksheet. 3 January 1991
DA FORM 5990-E	Maintenance Request. 1 March 1991

Department of Army Pamphlets

DA PAM 738-750	Functional Users Manual for the Army Maintenance Management System (TAMMS). 1 August 1994
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Field Manuals

FM 101-5	Staff Organization and Operations. 31 May 1997
FM 101-5-1	Operational Terms and Graphics. 30 September 1997
FM 11-24	Signal Tactical Satellite Company. 30 September 1985
FM 11-32	Combat Net Radio Operations. 15 October 1990
FM 11-55	Mobile Subscriber Equipment (MSE) Operations. 22 June 1999
FM 11-65	High Frequency Radio Communications. 31 October 1978
FM 21-26	Map Reading and Land Navigation. 7 May 1993
FM 24-11	Tactical Satellite Communications. 20 September 1990
FM 24-16	Communications-Electronics Operations, Orders, Records and Reports. 7 April 1978
FM 24-18	Tactical Single-Channel Radio Communications Techniques. 30 September 1987
FM 24-19	Radio Operator's Handbook. 24 May 1991
FM 24-22	Communications-Electronics Management System (CEMS). 30 June 1977
FM 24-33	Communications Techniques: Electronic Counter-Countermeasures. 17 July 1990
FM 24-35	(O) Signal Operations Instructions "The SOI". 26 October 1990
FM 24-35-1	(O) Signal Supplemental Instructions. 2 October 1990

FM 24-7

Tactical Local Area Network (LAN) Management. 8 October 1999

Other Product Types

ANCD MFG OPR MANUAL	Automated Network Control Device (ANCD) Manufacturer's (MFG) Operator (OPR) Manual
ASUM	Applications Software User's Manual (ASUM)
BFACS SUM	Battlefield Functional Area Control System (BFACS) Software User's Manual (SUM)
CDRL GO17 FBCB2 UMM	Contract Data Requirements List (CDRL) GO17 FBCB2 Unit Maintenance Manual (UMM)
CECOMM	Cincinnati Electronics Corporation Operation and Maintenance Manual (CECOMM) for the AN/PSC-7 Miniaturized UHF Satellite Transceiver. 20 January 1994
COTS CUM	Commercial-off-the-Shelf (COTS) Computer User's Manuals (CUM)
CUM	Computer User's Manual (CUM)
DOS MANUAL	Disk Operating System (DOS) (or other system) Manual
EQUIPMENT TM(S)	Equipment Technical Manual(s)
MFG MANUALS	Manufacturers' manuals, issued with initial issue of equipment
MS-DOS MANUAL	Microsoft-Disk Operating System (MS-DOS) User's Manual
NCIM	Network Card Installation Manual (NCIM)
NHUM	Network Hardware User's Manual (NHUM)
NSUM	Network Software User's Manual (NSUM)
OSUM	Operating system user's manuals
SOI	Signal Operation Instructions (SOI)
SUCM SOP	Senior Unit's Communications Maintenance (SUCM) Standing Operating Procedures (SOP)
SUM	Software User's Manuals.
UNIT LOI	Unit's Letter of Instruction (LOI)
UNIT OPLAN	Unit/Unit's Operation Plan (OPPLAN)
UNIT OPORD	Unit/Unit's Operation Order (OPORD)
UNIT SOI	Unit/Unit's Signal Operation Instructions (SOI)
UNIT SOP	Unit/Unit's Standing Operating Procedure (SOP)
UNIT TACTICAL SOP	Unit's Tactical Standing Operating Procedures (SOP)
WUM	WINDOWS User's Manual (WUM)

Supply Bulletins

SB 11-131-1	Vehicular Sets and Authorized Installations (Volume I). 1 March 1991
SB 11-131-2	Vehicular Radio Sets and Authorized Installations Volume II (SINCGARS, FHMUX, and EPLRS). 1 July 1998

Technical Bulletins

TB 380-41	(O) Procedures for Safeguarding, Accounting and Supply Control of COMSEC Material. 1 Oct 1994
TB 11-5820-890-12	Operator and Unit level Maintenance for AN/CYZ-10 Automated Net Control Device (ANCD) with the Single Channel Ground and Airborne Radio Systems (SINCGARS). 1 April 1993

Technical Manuals

(O)TM 11-5810-256-12	(O) Operator's and Unit Maintenance Manual for Communications Security Equipment TSEC/KY-57. 12 August 1993
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(O)TM 11-5810-256-OP-5	(O) Operating Procedures for Communications Security Equipment TSEC/KY-57 Retransmission. 12 May 1983
(O)TM 11-5810-312-12-1	(O) Operator's and Organizational Maintenance Manual: Installation Kits for Communications Security Equipment, TSEC/KY-57, Volume 1. 15 August 1982
(O)TM 11-5810-312-12-2	(O) Operator's and Organizational Maintenance Manual: Installation Kits for Communications Security Equipment, TSEC/KY-57, Volume 2, Installation Kits for Wheeled Vehicles. 8 September 1982
(O)TM 11-5810-312-12-3	(O) Operator's and Organizational Maintenance Manual: Installation Kits for Communications Security Equipment, TSEC/KY-57, Volume 3, Installation Kits for Tracked Vehicles. 15 November 1982
(O)TM 11-5810-312-12-4	(O) Operator's and Organizational Maintenance Manual: Installation Kits for Communications Security Equipment, TSEC/KY-57, Volume 4, Installation Kits for General Purpose Use and Shelter Applications. 19 April 1983
(O)TM 11-5810-329-23	(O) Unit and Intermediate Direct Support Maintenance Manual for Digital Subscriber Voice Terminal TSEC/KY-68 and Auxiliary Power Supply HYP-71/TSEC. 10 August 1987
(O)TM 11-5810-394-14&P	Operator's Unit, Direct Support, and Special Repair Activity Maintenance Manual (Including Repair Parts and Special Tools) for the Automated Net Control Device (ANCD) AN/CYZ-10. 14 January 1995
ANCD TM	Technical Manual (TM) for the Automated Network Control Device (ANCD)
DTM 11-5825-1157-10	No title 1 February 1997
DTM 11-5825-1157-20&P	No title 1 February 1997
DTM 11-7010-326-10	Operator's Manual Force XXI Battle Command Brigade and Below (FBCB2) 1 December 2000
DTM 11-7010-326-20&P	Unit Level Maintenance Manual for Force XXI Battle Command Brigade and Below (FBCB2) 1 December 2000
TM 11-2300-476-14&P	Operator's, Unit, Direct Support and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for Installation Kits, Electronic Equipment: MK-2442/GRC-213 for Armored Personnel Carrier-M113A1; MK-2443/GRC-213 1 January 1987
TM 11-5805-761-13&P	Operator's, Unit, and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Telephone, Digital, Non-Secure Voice TA-1035/U MSE. 1 September 1995
TM 11-5815-615-23	Unit and Direct Support Maintenance Manual for Lightweight Digital Facsimile AN/UXC-7. 1 September 1992
TM 11-5820-1021-23&P	Unit and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Terminal, Radiotelephone, Mobile Subscriber, AN/VRC-97 and Installation Kit, Electronic Equipment MK-2564/VRC-97 and MK-2565/VRC-97 MSE..... 1 September 1991
TM 11-5820-1048-10	Operator's Manual for Radio Set AN/PRC-127. 1 January 1991
TM 11-5820-1048-24&P	Unit, Direct Support, and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for Radio Set AN/PRC-127. 15 April 1990
TM 11-5820-1130-12&P	Operator's and Unit Maintenance Manual (Including Repair Parts and Special Tools List) for Radio Set AN/PSC-5. 1 June 2000
TM 11-5820-401-10-1	Operator's Manual for Radio Sets AN/VRC-12, AN/VRC-43, AN/VRC-44, AN/VRC-45, AN/VRC-46, AN/VRC-47, AN/VRC-48, and AN/VRC-49 (Used Without Intercom Systems) (Reprinted w/Basic Incl C1). 15 January 1986

TM 11-5820-401-20-1	Organizational Maintenance for Radio Sets AN/VRC-12, AN/VRC-43, AN/VRC-44, AN/VRC-45, AN/VRC-46, AN/VRC-47, AN/VRC-48, and AN/VRC-49 (Used Without Intercom Set) (Reprinted w/Basic Incl C1-3). 3 January 1984
TM 11-5820-401-20-2	Organizational Maintenance for Radio Sets AN/VRC-12, AN/VRC-43, AN/VRC-44, AN/VRC-45, AN/VRC-46, AN/VRC-47, AN/VRC-48 and AN/VRC-49 (Used With Intercom Set AN/VIC-1(V)) (Reprinted w/Basic Incl C1-3). 3 January 1984
TM 11-5820-498-12	Operator's and Organizational Maintenance Manual: Radio Sets, AN/VRC-53, AN/VRC-64, AN/GRC-125, and AN/GRC-160 and Amplifier-Power Supply Groups OA-3633/GRC and OA-3633A/GRC (Reprinted w/Basic Incl C1-10). 31 May 1967
TM 11-5820-890-10-1	Operator's Manual for SINCGARS Ground Combat Net Radio, ICOM Manpack Radio AN/PRC-119A, Short Range Vehicular Radio AN/VRC-87A, Short Range Vehicular Radio With Single Radio Mount AN/VRC-87C, Short Range.....AN/VRC-92A. 1 September 1992
TM 11-5820-890-10-8	Operator's Manual for SINCGARS Ground Combat Net Radio, ICOM Manpack Radio, AN/PRC-119A, Short Range Vehicular Radio AN/VRC-87A, Short Range Vehicular Radio with Single Radio Mount AN/VRC-87C, Short Range Vehicular Radio with Dismount 1 December 1998
TM 11-5820-890-20-1	Unit Maintenance Manual for Ground ICOM Radio Sets AN/PRC-119A, AN/PRC-119D, AN/PRC-119F, AN/VRC-87A, AN/VRC-87D, AN/VRC-87F, AN/VRC-88A, AN/VRC-88D, AN/VRC-88F, AN/VRC-89A, AN/VRC-89D, AN/VRC-89F, AN/VRC-90A, AN/VRC-90D, AN/VRC-90F, 1 December 1998
TM 11-5820-890-20-2	Unit Maintenance Manual for Ground ICOM Radio Sets AN/PRC-119A, AN/VRC-119D, AN/VRC-87A, AN/VRC-87C, AN/VRC-87D, AN/VRC-88A, AN/VRC-88D, AN/VRC-89A, AN/VRC-89D, AN/VRC-90A, AN/VRC-90D, AN/VRC-91A, AN/VRC-91D, AN/VRC-92A, AN/VRC-92D (With... 1 July 2000
TM 11-5820-890-20-3	Unit Level Maintenance Handbook, SINCGARS ICOM Ground Radios, Ground ICOM Radio Sets, AN/PRC-119A, AN/VRC-87A, AN/VRC-88A, AN/VRC-89A, AN/VRC-90A, AN/VRC-91A, AN/VRC-92A. 28 February 1995
TM 11-5820-923-12	Operator's and Organizational Maintenance Manual for Radio Set AN/GRC-213 (Reprinted w/Basic Incl C1-2). 14 February 1986
TM 11-5825-283-23	Unit and Direct Support Maintenance Manual for Radio Sets AN/ASQ-177(V)3, AN/ASQ-177(V)4, AN/PSQ-6, AN/VSQ-2(V)1, AN/VSQ-2(V)2, AN/VSQ-2(V)3, AN/VSQ-2(V)4, and Grid Reference Radio Set AN/GRC-229 as Part of Enhanced Position Location Report 1 April 1994
TM 11-5825-291-13	Operations and Maintenance Manual for Satellite Signals Navigation Sets AN/PSN-11 and AN/PSN-11(V)1 (Reprinted w/Basic Incl C1-2). 15 September 1995
TM 11-5830-340-12	Operator's and Unit Organizational Maintenance Manual for Intercommunication Set AN/VIC-1(V), and Control, Intercommunication Set, C-10456/VRC (Reprinted w/Basic Incl C1-4). 15 January 1986
TM 11-5895-1180-20	Organizational Maintenance Manual for Radio Set AN/PSC-3 (Reprinted w/Basic Incl C1-2). 15 February 1988
TM 11-5895-1181-10	Operator's Manual for Radio Set AN/VSC-7 (Reprinted with Basic Incl C1). 15 February 1988
TM 11-5895-1181-20	Organizational Maintenance Manual for Radio Set AN/VSC-7 (Reprinted w/Basic Incl C1). 15 February 1988

TM 11-5895-1348-13&P	Operator's, Unit and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Tactical Computer Processor AN/UYQ-43(V)1. 15 October 1993
TM 11-5985-357-13	Operator's, Organizational, and Direct Support Maintenance Manual for Antenna Group OE-254/GRC. 1 February 1991
TM 11-6625-3015-14	Operator's, Organizational, Direct Support and General Support Maintenance Manual for Radio Test Set, AN/PRM-34 (Reprinted w/Basic Incl C1-4). 14 October 1983
TM 11-6625-3052-14	Operator's, Unit, Direct Support and General Support Maintenance Manual for Digital Multimeter AN/PSM-45 (Reprinted w/Basic Incl C1-2). 10 January 1984
TM 11-7010-256-12&P	Operator's and Unit Maintenance Manual (Including Repair Parts and Special Tools List) for Tactical Command Systems used in M1068 Tracked Vehicle Configurations. 15 March 1998
TM 11-7010-258-12&P	Operator's and Unit Maintenance Manual (Including Repair Parts and Special Tools Lists) for Tactical Command Systems used in Soft Top Configuration. 15 March 1998
TM 11-7010-260-12&P	Operator's and Unit Maintenance Manual (Including Repair Parts and Special Tools List) for Tactical Command Systems used in Rigid Wall Shelter (Reprinted w/Basic Incl C1). 15 March 1998
TM 11-7010-263-13&P-1	Volume 1 of 3 Computer System, Digital (AN/GYQ-73) (Automated COMSEC Management and Engineering System (ACMES) - Phase I) Operator's, Unit, and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for V2 1 March 1996
TM 11-7010-263-13&P-2	Operator's, Unit, and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Computer System, Digital AN/GYQ-73 (Automated COMSEC Management and Engineering System (ACMES) - Phase I) V2 Computer, Digital/..... 1 July 1996
TM 11-7010-263-13&P-3	Operator's, Unit, And Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) Vol 3 of 3 for Computer System, Digital (AN/GYQ-73) (Automated COMSEC Management and Engineering System (ACMES) - Phase I) V2 Computer.. 1 August 1996

Training Support Packages

TSP 113-587-1067	Install Secure Single-Channel Ground and Airborne Radio System (SINCGARS) ICOM With or Without the AN/VIC-1. 1 March 1999
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Related Publications

Related publications are sources of additional information. They are not required in order to understand this publication.

Army Regulations

AR 750-1	Army Materiel Maintenance Policy and Retail Maintenance Operations. 1 August 1994
----------	---

Department of Army Forms

DA FORM 5164-R	Hands-On Evaluation (LRA). 1 September 1985
DA FORM 5165-R	Field Expedient Squad Book. 1 September 1985

Department of Army Pamphlets

DA PAM 738-750 Functional Users Manual for the Army Maintenance Management System (TAMMS). 1 August 1994

Department of Defense Publications

DD FORM 314 Preventive Maintenance Schedule and Record. 1 December 1953

Field Manuals

FM 11-32 Combat Net Radio Operations. 15 October 1990
FM 11-50 Combat Communications within the Division (Heavy & Light), 4 Apr 91
FM 21-16 Unexploded Ordnance (UXO) Procedures. 30 August 1994
FM 21-26 Map Reading and Land Navigation. 7 May 1993
FM 24-22 Communications-Electronics Management System (CEMS). 30 June 1977

FM 24-7 Tactical Local Area Network (LAN) Management. 8 October 1999
FM 25-100 Training the Force. 15 November 1988

Other Product Types

ASUM Applications Software User's Manual (ASUM)
BFACS SUM Battlefield Functional Area Control System (BFACS) Software User's Manual (SUM)

CECOMM Cincinnati Electronics Corporation Operation and Maintenance Manual (CECOMM) for the AN/PSC-7 Miniaturized UHF Satellite Transceiver. 20 January 1994

CUM Computer User's Manual (CUM)
DISAC 800-70-1 Methods and Procedures: Operation and Control of the Defense Satellite Communications System (DSCS). 15 April 1998

EQUIPMENT TM(S) Equipment Technical Manual(s)
GPS-DC MK III OSM Operating and Service Manual (OSM) for the GPS-DC MK III
MOM Manufacturer's/Monitor User's Manual (MOM)
MS-DOS MANUAL Microsoft-Disk Operating System (MS-DOS) User's Manual
PUM Printer User's Manual
TB 43-0129 Safety Requirements for Use of Antenna and Mast Equipment. 15 June 1986

WUM WINDOWS User's Manual (WUM)

Soldier Training Publications

STP 21-1-SMCT Soldier's Manual of Common Tasks Skill Level 1. 1 October 1994
STP 21-24-SMCT Soldier's Manual of Common Tasks (SMCT) Skill Levels 2-4. 1 October 1992

Supply Bulletins

SB 11-131-1 Vehicular Sets and Authorized Installations (Volume I). 1 March 1991
SB 11-131-2 Vehicular Radio Sets and Authorized Installations Volume II (SINCGARS, FHMUX, and EPLRS). 1 July 1998

Technical Bulletins

TB 43-180 Calibration and Repair Requirements for the Maintenance of Army Materiel. 1 December 2000

Technical Manuals

(O)TM 11-5810-312-12-1	(O) Operator's and Organizational Maintenance Manual: Installation Kits for Communications Security Equipment, TSEC/KY-57, Volume 1. 15 August 1982
(O)TM 11-5810-312-12-2	(O) Operator's and Organizational Maintenance Manual: Installation Kits for Communications Security Equipment, TSEC/KY-57, Volume 2, Installation Kits for Wheeled Vehicles. 8 September 1982
(O)TM 11-5810-312-12-3	(O) Operator's and Organizational Maintenance Manual: Installation Kits for Communications Security Equipment, TSEC/KY-57, Volume 3, Installation Kits for Tracked Vehicles. 15 November 1982
(O)TM 11-5810-394-14&P	Operator's Unit, Direct Support, and Special Repair Activity Maintenance Manual (Including Repair Parts and Special Tools) for the Automated Net Control Device (ANCD) AN/CYZ-10. 14 January 1995
DTM 11-7010-326-10	Operator's Manual Force XXI Battle Command Brigade and Below (FBCB2) 1 December 2000
DTM 11-7025-308-12&P	Operator's and Unit Maintenance Manual (Including Repair Parts and Special Tools List) for Disk Drive Units MU-1039(V)1/U, MU-1039(V)2/U, and MU-1039(V)3/U. Publication Date: 17 March 1994. Validated Draft Date: 30 March 1994. DRAFT ONLY.
TM 11-2300-475-13&P-2	Operator's, Organizational, and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Installation Kit, Electronic Equipment MK-2459/GRC-193A in General Purpose Installations for Radio Set AN/GRC-193A. 1 September 1987
TM 11-2300-475-13&P-5	Operator's, Unit, and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Installation Kit, Electronic Equipment MK-2544/GRC-193A in the CUCV, 3/4 Ton, 4 x 4, M1009. 1 July 1988
TM 11-2300-475-13&P-6	Operator's, Unit and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Installation Kit, Electronic Equipment, MK-2541/GRC-193A in HMMWV, Cargo/Troop Carrier M998, M1038. 1 July 1988
TM 11-5820-1046-12	Operator's and Organizational Maintenance Manual for Radio Set AN/PRC-104B(V)1 and AN/PRC-104B(V)4. 1 September 1989
TM 11-5820-1046-20P	Unit Maintenance Repair Parts and Special Tools List for Radio Set AN/PRC-104B(V)4. 1 February 1990
TM 11-5820-1047-12	Operator's and Organizational Maintenance Manual for Radio Set AN/GRC-213A(V)1. 1 September 1989
TM 11-5820-1047-20P	Organizational Maintenance Repair Parts and Special Tools List for Radio Set AN/GRC-213A(V)1. 15 May 1990
TM 11-5820-348-15	Organizational, Direct Support, General Support, and Depot Maintenance Manual: Antenna Equipment, RC-292 (Reprinted w/Basic Incl C2-7). 23 May 1966
TM 11-5820-401-20-1	Organizational Maintenance for Radio Sets AN/VRC-12, AN/VRC-43, AN/VRC-44, AN/VRC-45, AN/VRC-46, AN/VRC-47, AN/VRC-48, and AN/VRC-49 (Used Without Intercom Set) (Reprinted w/Basic Incl C1-3). 3 January 1984
TM 11-5820-401-20-2	Organizational Maintenance for Radio Sets AN/VRC-12, AN/VRC-43, AN/VRC-44, AN/VRC-45, AN/VRC-46, AN/VRC-47, AN/VRC-48 and AN/VRC-49 (Used With Intercom Set AN/VIC-1(V)) (Reprinted w/Basic Incl C1-3). 3 January 1984

TM 11-5820-467-15	Operator's, Organizational, Direct Support, General Support, and Depot Maintenance Manual for Antenna Group, AN/GRA-50 (Reprinted w/Basic Incl C3-7). 19 July 1961
TM 11-5820-667-12	Operator's and Organizational Maintenance Manual: Radio Set, AN/PRC-77 (Including Receiver-Transmitter, Radio, RT-841/PRC-77) (Reprinted w/Basic Incl C1-2). 1 January 1987
TM 11-5820-890-10	SINCGARS ASIP
TM 11-5820-890-10-6	SINCGARS ICOM Ground Radios Used With Automated Net Control Device (ANCD); Precision Lightweight GPS Receiver (PLGR); Handheld Remote Control Radio Device (HRCRD) Operator's Pocket Guide Radio Sets Manpack Radio (AN/PRC-119A/D/F),..... 1 December 1998
TM 11-5820-890-10-8	Operator's Manual for SINCGARS Ground Combat Net Radio, ICOM Manpack Radio, AN/PRC-119A, Short Range Vehicular Radio AN/VRC-87A, Short Range Vehicular Radio with Single Radio Mount AN/VRC-87C, Short Range Vehicular Radio with Dismount 1 December 1998
TM 11-5820-890-20-1	Unit Maintenance Manual for Ground ICOM Radio Sets AN/PRC-119A, AN/PRC-119D, AN/PRC-119F, AN/VRC-87A, AN/VRC-87D, AN/VRC-87F, AN/VRC-88A, AN/VRC-88D, AN/VRC-88F, AN/VRC-89A, AN/VRC-89D, AN/VRC-89F, AN/VRC-90A, AN/VRC-90D, AN/VRC-90F, 1 December 1998
TM 11-5820-890-20-2	Unit Maintenance Manual for Ground ICOM Radio Sets AN/PRC-119A, AN/VRC-119D, AN/VRC-87A, AN/VRC-87C, AN/VRC-87D, AN/VRC-88A, AN/VRC-88D, AN/VRC-89A, AN/VRC-89D, AN/VRC-90A, AN/VRC-90D, AN/VRC-91A, AN/VRC-91D, AN/VRC-92A, AN/VRC-92D (With... 1 July 2000
TM 11-5820-919-12	Operator's and Organizational Maintenance Manual for Radio Set AN/PRC-104(A). 15 January 1986
TM 11-5820-923-20P	Organizational Maintenance Repair Parts and Special Tools List for Radio Sets AN/GRC-213. 1 March 1987
TM 11-5820-924-13	Operator's, Organizational and Direct Support Maintenance Manual for Radio Set, AN/GRC-193A (Reprinted w/Basic Incl C1). 14 February 1986
TM 11-5825-283-10	Operator's Manual for Manpack Radio Sets AN/ASQ-177C(V)4; AN/PSQ-6C; AN/VSQ-2C(V)1; AN/VSQ-2C(V)2; AN/VSQ-2C(V)4; Grid Reference Radio Set AN/GRC-229C; Downsized Enhanced Command Response Unit RT-1718/TSQ-158A. 15 August 2000
TM 11-5825-283-10-1	Operator's Manual for Radio Sets AN/ASQ-177(V)3, AN/ASQ-177(V)4, AN/PSQ-6, AN/VSQ-2(V)1, AN/VSQ-2(V)2, AN/VSQ-2(V)3, AN/VSQ-2(V)4, and Grid Reference Radio Set AN/GRC-229 as Part of Enhanced Position Location Reporting System. 1 April 1994
TM 11-5825-291-13	Operations and Maintenance Manual for Satellite Signals Navigation Sets AN/PSN-11 and AN/PSN-11(V)1 (Reprinted w/Basic Incl C1-2). 15 September 1995
TM 11-5830-340-12	Operator's and Unit Organizational Maintenance Manual for Intercommunication Set AN/VIC-1(V), and Control, Intercommunication Set, C-10456/VRC (Reprinted w/Basic Incl C1-4). 15 January 1986
TM 11-5895-1180-20	Organizational Maintenance Manual for Radio Set AN/PSC-3 (Reprinted w/Basic Incl C1-2). 15 February 1988
TM 11-5895-1348-13&P	Operator's, Unit and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Tactical Computer Processor AN/UYQ-43(V)1. 15 October 1993
TM 11-5895-1546-12&P	Operator's and Unit Maintenance Manual (Including Repair Parts and Special Tools List) for Communications Modem, TCIM Assembly MD-

	1298/U, P/N 50766; TCIM 1 Assembly, P/N 50787; TCIM 2 Assembly, P/N 52605. 1 June 2000
TM 11-5895-284-12	Operator's and Organizational Maintenance Manual (Including Repair Parts and Special Tools List) for Radar, Surveillance Sets, AN/APS-94B and AN/APS-94C and Test Facilities Kit, MK-652/APS-94 (Reprinted with Basic Incl C1). 8 May 1970
TM 11-5985-370-12	Operator's and Organizational Maintenance Manual for Antenna Group OE-303/GRC. 19 July 1984
TM 11-6030-210-12	Operator's and Unit Maintenance Manual for Signal Data Converter CV-4175/U (Reprinted w/Basic Incl C1). 15 May 1993
TM 11-6130-476-12&P	Operator's and Unit Maintenance Manual (Including Repair Parts and Special Tools Lists) for Power Supply PP-8282/U. 15 September 1993
TM 11-6615-3052-14	not found in Pam 25-30
TM 11-6625-3015-14	Operator's, Organizational, Direct Support and General Support Maintenance Manual for Radio Test Set, AN/PRM-34 (Reprinted w/Basic Incl C1-4). 14 October 1983
TM 11-6625-3052-14	Operator's, Unit, Direct Support and General Support Maintenance Manual for Digital Multimeter AN/PSM-45 (Reprinted w/Basic Incl C1-2). 10 January 1984
TM 11-6625-3199-14	Operator's, Unit, Intermediate Direct Support, and General Support Maintenance Manual for Digital Multimeter AN/PSM-45A. 15 December 1988
TM 11-7010-263-13&P-2	Operator's, Unit, and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Computer System, Digital AN/GYQ-73 (Automated COMSEC Management and Engineering System (ACMES) - Phase I) V2 Computer, Digital/..... 1 July 1996
TM 11-7021-213-12&P	Operator's and Unit Maintenance Manual (Including Repair Parts and Special Tools List) for Series 300 Digital Computers. 1 February 1996
TM 11-7021-217-12&P	Operator's and Unit Maintenance Manual (Including Repair Parts and Special Tools List) for Computer, Digital CP-2112. 1 February 1994
TM 11-7025-280-12&P	Operator's and Unit Maintenance Manual (Including Repair Parts and Special Tools Lists) for Communications, Modem MD-1271/U; Communications, Modem MD-1271A/U; Communications, Modem MD-1271B/U. 1 June 1993
TM 11-7025-281-12&P	Operator's and Unit Maintenance Manual (Including Repair Parts and Special Tools List) for Automatic Data Processing Printers PT-546(V)1/U, PT-546(V)2/U, PT-546(v)3/U, PT-546(V)4/U, PT-546(V)5/U (Reprinted w/Basic Incl C1). 15 July 1993
TM 11-7025-283-12&P	Operator's and Unit Maintenance Manual (Including Repair Parts and Special Tools List) for Display Unit IP-1620(V)1/U, IP-1620-(V)2/U, IP-1621(V)1/U, IP-1621(V)2/U, IP-1654(V)1/U, IP-1654(V)2/U, IP-1655/U. 15 May 1993

Training Support Packages

TSP 113-587-1067	Install Secure Single-Channel Ground and Airborne Radio System (SINCGARS) ICOM With or Without the AN/VIC-1. 1 March 1999
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By Order of the Secretary of the Army:

ERIC K. SHINSEKI
General, United States Army
Chief of Staff

Official:

JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army

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